97th Congress
1st Session
COMMITTEE PRINT

RESTRUCTURING THE CIVIL SERVICE RETIREMENT SYSTEM: ANALYSIS OF OPTIONS TO CONTROL COSTS AND MAINTAIN RETIREMENT INCOME SECURITY

PREPARED FOR THE

SUBCOMMITTEE ON CIVIL SERVICE, POST OFFICE, AND GENERAL SERVICES

OF THE

COMMITTEE ON GOVERNMENTAL AFFAIRS
UNITED STATES SENATE

BY THE

CONGRESSIONAL RESEARCH SERVICE
LIBRARY OF CONGRESS

JANUARY 1982

Printed for the use of the Committee on Governmental Affairs

U.S. GOVERNMENT PRINTING OFFICE
88-001 O WASHINGTON : 1982

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402

5402-1

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LETTER OF TRANSMITTAL

U.S. Senate,
Committee on Governmental Affairs,
Subcommittee on Civil Service,
Post Office, and General Services,
Washington, D.C., January 4, 1982.

Hon. William V. Roth, Jr.,
Chairman, Committee on Governmental Affairs,
U.S. Senate, Washington, D.C.

Dear Bill: The Congressional Research Service of the Library of Congress has recently provided me with the final draft of a report on options Congress may consider to insure the financial stability of the federal retirement system. This report was conducted at my request as Chairman of the Subcommittee on Civil Service, Post Office, and General Services.

Although the report suggests numerous options Congress may wish to follow, it is important that I state at the outset that I and the other members of the Subcommittee have no firm commitment to any of these options.

I do think it is vitally important that the entire Congress be aware of this report; thus, I respectfully request that the study be issued as a Committee print so that it will be available as an information document.

With best wishes,
Cordially,

Ted Stevens, *Chairman.*

LETTER OF SUBMITTAL

CONGRESSIONAL RESEARCH SERVICE,
Washington, D.C., December 18, 1981.

Hon. TED STEVENS,
Chairman, Subcommittee on Civil Service, Post Office, and General Services, Committee on Governmental Affairs, U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: Your letter of September 8, 1981 asked the Congressional Research Service (CRS) to assist the Subcommittee on Civil Service, Post Office, and General Services, Committee on Governmental Affairs in developing options for modifying the current Civil Service Retirement System (CSRS). You noted that "controlling future costs in CSRS, while protecting the interests of both retirees and current employees, poses a major challenge to the 97th Congress." Specifically, you asked CRS to prepare a report "covering all aspects of the Federal employee benefit structure, including background and analysis to support restructuring the retirement system. Options discussed in the report should be comprehensive and interrelated." You also asked that options be included which would coordinate Federal employee benefits with social security and that all options included in the report be accompanied, as part of the analysis, by estimates of actuarial cost.

I am pleased to submit this report in response to your request. The report was prepared under the direction of P. Royal Shipp, Senior Specialist in Social Legislation, with Dennis Snook of the Education and Public Welfare (EPW) Division as principal analyst.

Analysts from three separate CRS divisions contributed to the project, as did researchers detailed to CRS from the Department of Health and Human Services and the Department of Labor. CRS analysts were: Vee Burke, Ken Cahill, Pamela Espenshade, Glenn Markus, Nancy Miller, and Ray Schmitt from EPW; Kathleen Swendiman from the American Law Division; and James McGrath from the Government Division. Lynn Rockwell from the Department of Labor and Duke Wilson from the Department of Health and Human Services also contributed to the report. Actuarial estimates were done by Edwin C. Hustead (FSA) of Hay Associates under contract with CRS and by the Office of the Actuary of the Social Security Administration. Harold Fairman of Hay Associates assisted in the design of the options. The Office of Personnel Management made available information on the current CSRS which was used in the actuarial estimates. Ken Cahill and Ray Schmitt of CRS developed a computer model used to estimate effects of the options on retirees.

We hope this report meets the needs of the subcommittee as it considers legislation concerning this important retirement program. We are prepared to provide additional assistance as your work develops.

Sincerely,

GILBERT GUDE,
Director.

Enclosure.

PREFACE

This report was prepared at the request of Senator Ted Stevens, Chairman, Subcommittee on Civil Service, Post Office, and General Services, Committee on Governmental Affairs. Senator Stevens noted that "controlling future costs in Civil Service retirement, while protecting the interests of both retirees and current employees, poses a major challenge to the 97th Congress." He asked the Congressional Research Service (CRS) to develop a report to analyze the various major options the subcommittee might wish to consider for modifying the present Civil Service Retirement System (CSRS). Specifically, the report was to cover "all aspects of the Federal employee benefit structure, including background and analysis to support restructuring the retirement system." CRS was asked to include, among the options, "coordination of Federal employee benefits with social security."

The project was directed by P. Royal Shipp, Senior Specialist in Social Legislation, with Dennis Snook, of the Education and Public Welfare (EPW) Division, as principal analyst.

In addition, analysts from four separate CRS divisions contributed to the project, as did researchers detailed to CRS from the Department of Health and Human Services and from the Department of Labor. CRS analysts were: Vee Burke, Ken Cahill, Pamela Espenshade, Glenn Markus, Nancy Miller, and Ray Schmitt from EPW: Kathleen Swendiman from the American Law Division; and James McGrath from the Government Division. Lynn Rockwell from the Department of Labor and Duke Wilson from the Department of Health and Human Services also contributed to the report. Ken Cahill and Ray Schmitt developed a computer model used to calculate benefit replacement rates.

Actuarial estimates were provided by Edwin C. Hustead (F.S.A.) of Hay Associates under contract with CRS, and by the Office of the Actuary of the Social Security Administration. Harold Fairman of Hay Associates assisted in the design of the options analyzed. The Office of Personnel Management made available information on the current CSRS which was used in the actuarial estimates

The many drafts of the report were typed with patience, good humor, and competence by Susan Campbell, Carlotta Davis, Flora Dean, Brenda Freeman, Deborah Johnson, and Helen McKoy.

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I. INTRODUCTION AND SUMMARY

The Civil Service Retirement System (CSRS) is the Nation's largest pension program. During fiscal year 1981, CSRS paid benefits totaling $17.3 billion to 1.7 million Federal retirees and survivors. By design, CSRS benefit dollars are concentrated on long-term Federal workers, although the system covers nine out of ten Federal civilian employees. It is estimated that approximately one-fourth of newly employed Federal workers will receive about 67 percent of the benefits paid by CSRS.

This report briefly describes the current CSRS and then presents four basic options for restructuring the system. The report was made at the request of the Chairman of the Senate Subcommittee on Civil Service, Post Office, and General Services, who noted that "controlling future costs in Civil Service retirement, while protecting the interests of both retirees and current employees, poses a major challenge to the 97th Congress." The Chairman asked the Congressional Research Service (CRS) to develop options for subcommittee consideration, including coordination of Federal employee benefits with social security, and specifically requested assistance from CRS in developing options for the subcommittee to consider.

The options for analysis highlight certain features of the current CSRS and important issues raised by coordinating CSRS with social security. To structure options to control overall program costs, it was necessary to identify those elements of the current program that are most costly. To understand the consequences of the options, it was necessary to examine their effects on individual CSRS retirees.

The analysis concentrates on estimating the costs of the current system and of each option for change. The cost estimates include both short-term effects on the Federal budget and long-term actuarial costs.[1] The analysis also compares the retirement benefits of future CSRS retirees with their earnings in the final year of work (this ratio is called the earnings replacement rate) and then shows how these replacement rates would vary under each of the four basic options.

The analysis indicates that the most costly feature of CSRS is the full adjustment of benefits for annual changes in the Consumer Price Index (CPI). Actuaries estimate that every 1 percent per year increase in the CPI increases the costs of a fully indexed system such as CSRS by 11 percent. Early retirement is a second costly feature of the current system. Federal workers under CSRS are eligible for an unreduced pension at age 55 after 30 years of service. During periods of high inflation, Federal pay increases tend to lag behind increases in consumer prices, and many employees find it to their advantage to retire early because their pension checks are fully indexed while their salaries are not.

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[1] Actuarial estimates were done by Hay Associates under contract to the Congressional Research Service and by the Office of the Actuary of the Social Security Administration. Certain data used for estimating actuarial costs were provided by the Compensation Group, Office of Personnel Management.

While all four basic options for change would reduce long-term costs, the analysis also shows that the short-term savings depend on whether the changes would affect all workers or only new employees. If all current workers were "grandfathered" under the current retirement system, short-term savings would be small. On the other hand, if reductions in short-term costs are sought, then the changes would have to affect current workers and possibly even current retirees. The analysis further shows that it is possible to control long-term CSRS costs while maintaining the basic benefit levels for full-career Federal workers. Under such "restructured" systems more equitable benefits could be provided to workers who leave Federal employment before retirement. Such controlled cost results could be achieved by less than full cost-of-living adjustments and less generous early retirement provisions. The analysis also indicates the effects on overall retirement income of offering the opportunity for additional savings on the part of employees through contributions to thrift plans or to an Individual Retirement Account (IRA).

The four basic options for restructuring CSRS in this report reflect the emphasis in the congressional request and the findings of the cost analysis. All of the options were designed to help control costs, and each option features a distinct method for achieving this additional control over costs. These options are briefly summarized in table 1 and in the following discussion.

OPTIONS FOR CHANGE

This report presents four basic options, with variations, for restructuring CSRS. The first option would not cover Federal workers under social security, but would achieve short-term budget reductions by changing CSRS benefits for current workers, and, in the case of one variant, for current annuitants. The second and third options would apply only to new employees, would coordinate CSRS with social security, and would pay coordinated benefits, for long-term workers, roughly equal to those of the current CSRS. The final option would provide for a defined contribution plan to supplement social security coverage; that is, a fixed percentage of salary would be contributed by the Federal Government to fund a worker's annuity, the size of which would depend on the sum accumulated in an individual's account. Under this final option, the Federal Government also would offer matching funds (at rates of either 50 percent or 100 percent) to a worker who put savings into thrift plans, and these sums would increase the worker's retirement account.

TABLE 1.—KEY CSRS PROVISIONS UNDER CURRENT SYSTEM AND UNDER VARIOUS OPTIONS FOR CHANGE

Option	Social security coverage	Indexing to CPI	Earliest retirement age, unreduced benefits	Persons affected	Benefits
Current CSRS	No	100 percent annual.	Age 55, 30 yrs service.		Salary base = highest 3-yr average; benefit = 1.5 percent × 1-5 yr service plus 1.75 percent × 6-10 yrs service plus 2 percent × base × 11 or more yrs service.
Option 1-A	No	70 percent annual.	Eventually (long phase-in), age 60, with 30 yrs service.	All workers and annuitants.	Same as current.
Option 1-B	No	100 percent annual.	Immediately, age 60, with 30 yrs service.	All workers	Same as current.
Option 1-C	No	100 percent annual.	Age 55, 30 yrs service.	All workers	Salary base changed to highest 5-yrs average.
Option 2	Yes	70 percent annual.	Age 55, 30 yrs service.	New employees only.	Benefit = 1.5 percent × base × yrs service, offset at age 62 by 1.25 percent × basic social security benefit × yrs service.
Option 3	Yes	50 percent annual.	Age 65, with 5 yrs service.	New employees only.	Benefit = 2 percent base × yr service minus 1.43 percent × basic social security benefit × yr service.
Options 4-A, 4-B	Yes	Retiree option.	Account balance available upon separation after 5 yrs service at any age.	New employees only.	Targeted benefits vary with investment returns; matching thrift plan.

OPTION 1

The three variations of Option 1 deal with one or more of the costly features of the current CSRS: benefit adjustment for price inflation, early retirement, and the earnings base used to calculate benefits. Option 1-A, limiting the cost-of-living adjustment (COLA) to 70 percent of the rise in the CPI, yields the greatest long-term savings, an estimated $2.9 billion per year in 1981 dollars. Option 1-B, raising the retirement age for unreduced benefits from 55 to 60 years, and Option 1-C, lengthening the earnings base from the highest 3-year average to the highest 5-year average, would yield about $780 million and $900 million in 1981 dollars, respectively, in long-term savings. These provisions, because they would apply to current workers and (in Option 1-A) current annuitants, would also produce immediate budget savings.

OPTIONS 2 AND 3

Both options would integrate CSRS with social security for *new employees* only. Option 2 is designed to produce approximately the same initial benefit structure as the current system for the person who retires at age 65 after 40 years of service, but then limits subsequent cost-of-living benefit adjustments to 70 percent of the CPI change. Option 3 would yield a higher initial benefit for the long-term worker, but then would cut cost-of-living benefit adjustments even more sharply, limiting them to 50 percent of the CPI change. Option 3 would for the first time permit a Federal worker to retire at age 55 with only 10 years of service, but his benefit would be reduced for retiring after so short a period. After age 62, benefits would come from both CSRS and social security.

Both options would entitle persons who worked at least 5 years and left Federal service before retirement to retain rights to any benefit based upon the employer's contributions. Because these options would not require employee contributions, these vesting rights would grant a significant new advantage over the present system, even though this analysis assumes that employees would not be able to withdraw these employer contributions in cash upon termination of employment. The present CSRS forfeits all benefit rights to employees who withdraw their own contributions at separation.

The long-term cost of the total Federal retirement program, including social security, under Options 2 and 3 could be reduced below the cost of the current system. This long-term savings is estimated at about 2.2 percent of payroll, or $1.3 billion per year, in 1981 dollars. The savings are achieved primarily by limiting COLA, by reducing benefits for early retirement, and by eliminating future "windfall" benefits to those with coverage under both CSRS and social security. Coverage under social security for new employees would result in a substantial addition to the revenues of the social security trust funds, totaling about $9.4 billion in the first 5 years.

OPTION 4

Option 4, which also affects only new employees and coordinates its benefits with those of social security, is basically unlike the current system and the other options because it offers a defined contribution plan rather than a defined benefit plan. It also adds an optional thrift plan, with matching funds from the government, to supplement social security and pension benefits. This option would entitle persons who worked at least 5 years and left Federal service before retirement to take their "accrued full benefit," that is, their own CSRS contributions, plus the employer's contributions, plus interest, would be refunded on demand.

SUMMARY

All four options would reduce government outlays in the long term, by amounts ranging from 1.35 percent of yearly payroll for Option 1-B (roughly $780 million in 1981 dollars) to 5.98 percent of payroll for Option 4-B (almost $3.5 billion in 1981 dollars).

As table 2 shows, all four options yield relatively high benefits, in relation to net earnings of a long-term worker in his final year of work. These net replacement ratios, which under the current system range from 102.5 percent to 129.1 percent for a worker who retires at age 65 after 40 years, range under the options from 93.5 percent (Option 4-B) to 129.1 percent (Option 1-A).

TABLE 2.—EFFECTS OF OPTIONS TO CHANGE CSRS

Option	Cost to employee	Net budget savings (in millions of 1981 dollars)		Long-term government savings (as percent of payroll)	Effect on net replacement rates (worker retiring at age 65, after 40 years service—percent)	
		1983	1986		Range at age 65[1]	Range at age 80
Current CSRS	7 percent of entire salary				102.5 to 129.1	85.1 to 89.5
Option 1 (modified CSRS):						
1–A (change COLA and retirement age)	do	$300	$2,310	5.06	102.5 to 129.1	73.0 to 78.4
1–B (change retirement age)	do	90	650	1.35	102.5 to 129.1	85.1 to 89.5
1–C (change benefit base)	do	20	180	1.56	97.1 to 122.3	80.8 to 85.0
Option 2 (CSRS + social security)	6.7 percent of social security wage base ($32,400 in 1982).	[2](20)	180	2.21	100.0 to 103.0	91.3 to 95.6
Option 3 (CSRS + social security)	See option 2	[2](20)	180	2.20	110.2 to 114.0	94.5 to 99.8
Option 4 (CSRS + social security):						
4–A	See option 2[3]	30	310	2.48	[4] 110.5 to 124.1	[4] 110.5 to 124.1
4–B	See option 2[3]	30	420	5.98	[4] 93.5 to 104.4	[4] 93.5 to 104.4

[1] Replacement rates at retirement under current CSRS and option 1 are substantially higher than after retirement because CSRS benefits are not taxable until CSRS benefits exceed employees' CSRS contributions.

[2] Numbers in parentheses are net additions to overall budget costs.

[3] In addition, employee could put up to 6 percent of salary in an employer-matched thrift plan (employer match at 100 percent under option 4–A, 50 percent under option 4–B).

[4] Rates reflect only employer-funded portion of thrift-plan benefit.

The focus of the four options discussed in this report is on the retirement system. Ultimately, issues concerning retirement benefits will be affected by considerations of overall Federal personnel needs and compensation, as compared to compensation in the private sector, as well as other features of the overall Federal worker benefit package, such as disability protection and survivor benefits. Some of these contextual issues are discussed briefly in the report and in the appendixes, but the major analysis of the options is limited to changes in the retirement system.

Part II of the report is a brief description of the history and provisions of the current CSRS. Part III discusses various issues that have arisen in recent years concerning the CSRS and that are integral to the broad issues of cost and equity analyzed in the report. Part IV, the central part of the report, is an analysis of the options for modifying the current CSRS.

Additional background material is presented in five appendixes. An extensive analysis of earnings replacement rates under the current CSRS and the options for change is followed by a technical explanation of the computer model (developed by CRS) used to calculate these replacement rates. Additional information on issues associated with coverage of Federal workers by social security on how CRS funds are currently invested, and a legal analysis of the nature of CSRS entitlements also are provided.

The emphasis of this report is on the analysis of specific options for restructuring the CSRS in order to control costs. The effects of such cost-controlling options on the Federal budget, on the overall size of the retirement system, and on benefits received by specific categories of Federal employees—particularly at retirement and thereafter—constitute the central contribution of the report.

While the level of program benefits under the four options is set to control costs, there is nothing inherent in the options themselves that requires this outcome. With only modest liberalization in the benefit features, these same basic options would maintain the same program cost as the current CSRS, or even expand it.

II. THE CIVIL SERVICE RETIREMENT SYSTEM

The Civil Service Retirement System (CSRS) is a staff retirement plan for Federal civilian personnel. Although there are 38 Federal retirement programs, CSRS is by far the largest and also the oldest retirement program for employees in the competitive civil service. In fiscal year 1981, CSRS covered over 2.7 million workers and paid more than $17.3 billion in benefits to 1.7 million retirees and survivors. The system is financed by a combination of employee contributions and government payments to the Civil Service Retirement and Disability Fund. Benefits are granted by entitlement.

The following discussion of the current CSRS is divided into two sections. First, a brief history of the origins of the system and of pension plans generally is provided. Second, the provisions of CSRS are described with an emphasis on the evolution of the system's key features.

HISTORY [2]

The CSRS was established by Congress in 1920. The purpose of the system was to improve government efficiency by providing management with a humane method of retiring civil servants whose age or disability prevented performance of their duties. It was common at the time for older workers to be, in effect, retired on the job, receiving full salary while performing little or no productive work. This informal retirement system was costly and blocked the flow of appointments and promotions necessary to recruit and retain employees who were able to do the job.

Active debate and lobbying for a Federal civilian pension system began in the late 1800s. Beginning in 1899, the Civil Service Commission, in its annual reports, recommended the adoption of a retirement system financed in whole or in part from employees' salaries. In 1900, an association of Federal employees was formed to lobby for a retirement system. Also in 1900, a Federal retirement system was supported by the Secretary of the Treasury. Retirement plans for civil servants were part of the Republican Party platform in 1912 and of the Democratic Party platform in 1918. In 1919, the largest of the new Federal unions, the Federal Employee Union, sponsored a Joint Conference on Retirement which resulted in all of the Federal unions uniting in their support of a contributory pension plan. Between 1897 and 1920, over 100 bills dealing with Federal civilian pensions were introduced in Congress.

Finally in 1920, faced with the dual problems of improving executive branch efficiency and the need to substantially reduce employment to prewar levels, Congress passed the Civil Service Retirement Act.

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[2] This section is based on information from several books and reports. One useful source is Greenough, William C., and Francis P. King. Pension Plans and Public Policy. New York, Columbia University Press, 1976.

The development of the earliest pension plans in the States and in private industry preceded the development of the CSRS. The first public employee retirement system was established in 1857 covering the police force in New York City. By 1896, teacher retirement funds had been established in many large cities. In 1911, Massachusetts became the first State to establish a statewide retirement plan for non-teaching employees. The number of plans and the level of benefits grew gradually in the 1920s, but the major development occurred between 1941 and 1947 when 22 States enacted pension plans. Today most State and local government employees participate in a retirement plan of some type.

The first private sector pension plan was founded in 1875 for the employees of the American Express Company. By 1900, however, only about a dozen plans had been started because issues such as hours of work, working conditions, pay scales, and the right of employees to organize dominated labor-management relations at the turn of the century. The railroad industry, which employed large numbers of workers in hazardous jobs, was the leader in providing pension benefits for employees with 35 percent of all railroad employees covered by 1905. The first enduring pension plan in a manufacturing firm was established in 1901 by the Carnegie Steel Company. Early growth in private sector pension plans was greatest between 1900 and 1920. By 1920, most of the major railroads, utility companies, banks, mining corporations, petroleum companies, and many manufacturing firms had formal pension plans. By the end of 1929, employees in corporations with pension plans numbered over 3.7 million, or roughly 10 percent of the nonagricultural labor force.

The social security program was enacted in 1935 specifically to cover employees of commerce and industry. At that time, CSRS participants were already eligible for and receiving a dependable source of income in retirement and it was therefore not considered necessary or desirable to immediately cover Federal workers under social security. Improvements in social security benefits have been roughly parallel to improvements in CSRS. In 1939, for example, survivors benefits were added to both systems. Although CSRS had a disability retirement provision since its inception, protection for disabled workers was not added to the social security system until 1956.

THE EVOLUTION OF CSRS PROVISIONS

Since the system was enacted 6 decades ago, over 150 laws passed by Congress and numerous Executive Orders issued by the President have modified the CSRS. It has evolved from a system which served primarily as a management tool to improve staff efficiency to a system which serves primarily as a vehicle for providing retired employees and their families with financial security.

The first CSRS retirement plan included a benefit based on length of service, up to 30 years, and the average salary of the final 10 years of service. Three mandatory retirement ages were established based on the type of work performed. For most white-collar workers, retirement was mandatory at age 70. No survivors benefits were provided, other than a return of the employee's contributions. Disabled employees could retire before age 70 if they had at least 15 years of service. Contributions by the employee were mandatory and were 2½ percent of salary.

The present system bears little resemblance to that established by the original legislation. The major provisions of the current plan are summarized in table 3. Five key provisions are more fully described in the text following.

TABLE 3.—PROVISIONS OF THE CURRENT CIVIL SERVICE RETIREMENT SYSTEM

Mandatory contributions	Seven percent of employee salary.
Vesting	Employee eligible for retirement benefit payable at age 62 after 5 years of civilian service. If employee contributions are withdrawn, vesting is forfeited.
Retirement benefit formula	High 3-year average salary multiplied by the sum of: 1.5 percent × first 5 years of service. 1.75 percent × second 5 years of service. 2 percent × all years of service over 10. Maximum benefit is 80 percent of high-3.
Optional retirement	Full benefit payable at: age 55 with 30 years of service, age 60 with 20 years of service, or age 62 with 5 years of service.
Involuntary retirement	Benefit payable at age 50 with 20 years of service or at any age with 25 years of service. Benefit reduced by ⅙ of 1 percent for each month under age 55.
Disability	Employee eligible for benefit if disease or injury prevents performance of job. Must have 5 years service. The annuity is the benefit earned at disability, or, if larger, the lesser of (a) 40 percent of high-3 pay or (b) the annuity that would have been paid if the employee had continued working until age 60 at the same high-3 pay.
Preretirement survivors benefit	Coverage begins after 18 months of service. Spouse receives 55 percent of disability retirement benefit. Children's benefit is unrelated to annuity payment; formula varies based on whether orphaned or not.
Postretirement survivors benefit	If joint survivor coverage is chosen by employee, surviving spouse or person with insured interest (adjusted for age) receives 55 percent of the previously reduced annuity. Children's benefit is the same as preretirement coverage.
Cost-of-living adjustments	Retiree and survivor annuities adjusted each March to reflect full increase in the Consumer Price Index as of December of the preceding year.

VESTING

Generally, any employee with 5 years of civilian Federal service is a vested member of the system, that is, is eligible to receive benefits upon retirement. Vested participants who leave CSRS employment receive either a refund equal to their CSRS contributions (without interest) or a deferred retirement annuity payable when the participant reaches age 62. Participants who are not vested and leave CSRS employment are eligible to receive only refunds of their contributions plus interest.

The original 1920 law required that a participant complete 15 years of service in order to be eligible for a retirement benefit. This standard continued until 1942, when the current 5-year vesting provision was established. This liberalization of vesting requirements was intended as a practical solution to the problem of lack of coordination with the social security system. Prior to this, if an employee left Federal service after, for example, 10 years, the employee would receive no credit under any retirement system for the 10 years of Federal service unless the individual were reemployed at a later date and paid back the refunded contributions.

Almost all private sector employees, however, are covered under the social security system, the protection and benefits of which follow employees from job to job in the private sector. These workers therefore do not face the same problems of "portability" of pension benefits as Federal workers without social security coverage.

BENEFIT FORMULA

Under the general formula, a percentage of average salary during the highest 3 consecutive years of earnings (High-3) is multiplied by years of service as follows: 1½ percent times the first 5 years of service, 1¾ percent times the next 5 years of service, and 2 percent times any remaining years. The results are then added to obtain the basic annual annuity.

The maximum benefit is 80 percent of the retiree's High-3 average annual pay; this limit is reached with 41 years and 11 months of service. Additional annuity attributable to credit allowed for unused sick leave is permitted over and above this limitation. The minimum benefit cannot be less than the smallest social security primary insurance amount. This minimum is only applied if the annuitant is not entitled to any other periodic payment from the government that equals or exceeds the smallest primary insurance amount which is then in effect.

The percentage component of the benefit formula was instituted in 1956 as a means of liberalizing the existing formula (1½ percent of final average salary, High-5, for each year of service). The percentages in the formula were a compromise between the House, which proposed that 1¾ percent be applied for all years of service, and the Senate, which proposed to retain the 1½ percent for the first 5 years with 2 percent applied to all other years. The final formula developed substantially favors older workers with long careers.

The legislative history suggests that final result was not necessarily intended to favor long-term workers, but represented a compromise between House and Senate versions. Those in favor of the formula saw it as a method of liberalizing the benefit. Federal unions had strongly argued that benefits had not kept pace with private industry and that benefits were not adequate. The Civil Service Commission favored the benefit formula proposed by the House because it felt the amendment proposed by the Senate was too expensive and would result in the government eventually paying substantially more than the employee to support the benefit increases.

NORMAL RETIREMENT AGE (OPTIONAL RETIREMENT)

Retirement with a full (unreduced) annuity is permissible at the option of the employee at age 55 with 30 years of service, at age 60 with 20 years of service, and at age 62 with 5 years of service.

Optional retirement within 2 years of the normal retirement age (age 65) after 30 years of service was first introduced in 1930. This remained unchanged until 1942 when the optional retirement provision was expanded to permit retirement with unreduced annuity at age 60 with 30 years of service and at age 62 with 15 years of service. This liberalization of the optional retirement provision was strongly supported by Federal employee unions, especially those unions whose members were affected by the mandatory retirement age at age 70 with 15 years of service. Most Federal unions at that time sought retirement after 30 years of service with no age requirement.

In 1956, the service requirement for optional retirement at age 62 was reduced from 15 to 5 years of service. An 1966, the optional retirement provisions were again liberalized by permitting retirement on unreduced annuity at age 55 with 30 years of service, at age 60 with 20 years of service, and at age 62 with 5 years of service. Optional retirement at age 55 and 30 years of service was a provision which the President urged the Congress to adopt. His proposal, however, would also have permitted agency management to retire, without the employee's consent, any employee meeting the more liberal age and service requirements. This proposal was opposed by representatives of Federal workers and was not adopted by Congress.

COST-OF-LIVING ADJUSTMENTS

All CSRS annuities are adjusted March 1 of each year. The adjustment is automatic and is based on the Consumer Price Index (CPI). The first cost-of-living adjustment (COLA) to which a retiree is entitled is prorated based on the date the annuity begins.

The first COLA provision was implemented in 1962 with the passage of Public Law 87-793, a major salary reform bill proposed by the Administration. The purpose of the act was to improve the government's ability to compete with private firms for qualified personnel; major reforms were made to the General Schedule wage scale, increasing the differential in wages among highly paid and lower-paid employees. (The act also introduced the principle of comparability with the private sector as a standard for setting Federal salaries. This is discussed below.) The first COLA was an annual adjustment when the CPI rose over 3 percent. This provision was a compromise between the views of Federal employee unions, which supported automatic adjustments whenever the CPI increased by 1 percent, and the views of the Administration, which supported automatic adjustments whenever the CPI increased by 5 percent.

In the period between 1969 and late 1976, COLAs were increased by 1 percent more than the increase in the CPI. From 1977 until

1981 when the current annual adjustment was instituted, COLAs were granted on March 1 and September 1 of each year by an amount equal to increases in the CPI.

FINANCING

Payments to civil service retirees are financed through the Civil Service Retirement and Disability Fund, which is used to hold assets in trust for CSRS members by the U.S. Treasury.[3] These assets are, for the most part, in the form of specifically created Federal financial instruments in which revenues to the fund are invested. In fiscal year 1981, the CSRS fund received revenues totaling $28.2 billion of which $3.8 billion came from employee contributions, $6.0 billion from interest, and $18.4 billion from direct Federal contributions. Payments from general revenues in 1981 increased by 18 percent over 1980 levels, while contributions from employees increased by 3 percent. Expenses of the fund totaled $17.7 billion; of that total, $15.0 billion was paid to retirees, $2.2 billion was paid to survivors, $500 million was refunded, and $31 million was obligated as administrative expenses.[4]

Since the passage of Public Law 91-93 in 1969, CSRS income has been collected from four main sources:

1. Employees covered by CSRS contribute 7 percent of their basic pay through payroll deductions.
2. Employing agencies must contribute an amount matching the contribution of their employees.
3. The U.S. Treasury makes substantial contribution under specified conditions from general revenues.
4. The fund earns interest by investing revenues received from the first three sources. Money in the fund can, by law, be invested only in interest-bearing U.S. Government securities.

There are three types of payments from the general revenues. First, any projected increases in benefit outlays resulting from pay raises and benefit liberalizations are paid for in 30 equal annual installments. (Increases due to COLA are specifically excluded from this payment.) The calculation of the 30-year payment is one way in which the full cost of proposed and actual Federal benefits or pay raises is disclosed to the public. Second, the fund is reimbursed for benefits paid due to military service. Third, interest on the remaining unfunded liability, including the cost of past COLA, is to be paid each year as if the amount of unfunded liability represented fund investments.

Costs of CSRS are increasing each year. Despite the fact that the Office of Personnel Management has projected that under current funding arrangements the Civil Service Retirement Fund will continue to operate from a sound cash position for the indefinite future, issues have been raised regarding the appropriate level of current funding and the size of the unfunded liability. These issues and others are discussed in the next section.

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[3] See Appendix D for a discussion of some of the issues raised concerning investment of trust fund assets.

[4] U.S. Congress. House. Committee on Post Office and Civil Service. Civil Service Retirement System; History, Provisions, and Financing. Committee Print, 97th Cong., 1st Sess. Washington, U.S. Govt. Print. Off., 1981. p. 48-49.

Civil Service Retirement in Other Countries[5]

Civil service retirement systems are distinctive in many countries. Some systems are totally separate, as in the United States, while others are integrated to varying degrees with national social security programs. The historical pattern among Western nations has been to provide for the retirement of government employees and members of the armed forces first and then to provide for workers in industry and commerce. Benefits under the separate systems for civil servants are frequently more liberal than under the national social security systems and thus, there has been an incentive to remain apart.

Pension systems for civil servants have roots that reach farther back than pension systems for other groups. In England in the late 1780s numerous sinecure, or patronage, offices were held by civil servants who had a lifetime income through continuing payments arranged with successors. Despite some abuses and corruption within this system, a consensus remained that long service should be rewarded and that a civil servant needed to be independent from financial concerns. The civil service in France has roots in Roman law and in a centralized system arising out of the concept of divine right. French government administration has worked hard for a high degree of permanence in its personnel; civil servants are considered bonded to the State, not to a government or party. In Germany, a civil servant is not a contractual employee, but a representative of the State in a service relationship. The distinctive characteristics of civil service employment in these nations have facilitated the development of special, separate pension programs.

Today, France has a social insurance system for about 70 percent of privately employed persons which is complemented by mandatory private pensions authorized and approved by the government. French public employees, however, have a totally separate system that provides a relatively high level of pensions comparable to general social security combined with a private pension. Belgium has a separate public old-age pension for government employees, as well as ones for the self-employed, white- and blue-collar employees, miners, and seamen. In Germany, civil servants are a select subset of all public employees and as such are exempt from the general social security system. Given that public service in Germany is considered a lifetime career, with little transfer to private employment, the government provides an attractive noncontributory pension for civil servants after 35 years of service. The German language reflects the distinctive nature of civil service retirement payments which are called "pension," that is, superannuation, denoting their gratuitous, noncontributory character. Other retirement benefits, including general social security, are called "renten" or income, indicating origins in a contributory fund.

Japan has had some discussion of merging its several pension systems, but strength of customs retains a three-prong structure.

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[5] Several reports and other publications were consulted in preparing this section. The most comprehensive was International Social Security Association. Social Security for Public Employees. Introductory Report. International Conference on Social Security for Public Employees. Mexico City. Oct. 1975.

There is a general employees pension insurance for employees of firms in industry and commerce, a national pension program for those in small business and the self-employed, and a group of mutual benefit societies, administered by different ministries, which provide pension coverage for various public employee groups. Pension benefits for government employees are usually higher than in the private sector, but the level of employee contributions is also slightly higher.

The United Kingdom has a social insurance system with a basic pension and an earnings-related component. Civil servants remain apart from the general system; they are covered instead by the Principal Civil Service Pension Scheme, which is funded by Parliament and which provides both an annual pension and a lump sum benefit based upon salary and length of service. These civil service pensions are reduced, however, to take account of flat-rate national insurance. Both the civil service pension and the flat-rate national insurance are adjusted for changes in the cost of living. Similarly, the Netherlands has a special pension scheme for civil servants and a general pension for all residents; benefits from the former are adjusted to coordinate with the latter.

Sweden, Finland, Denmark, Norway, and Canada all have systems which combine a universal pension with earnings-related pensions. Each of these nations has a public employee pension that was not initially conceived as part of social insurance proper, but that was later adapted to integrate with the nationwide programs. These public employee pensions and nationwide programs provide cost-of-living adjustments. Sweden—the nation with perhaps the greatest degree of coordination between public and private systems—has a national flat-rate pension for all resident citizens; a second tier of earnings-related pensions financed entirely by employer contributions, and a third tier for salaried employees in private industry based on collective agreements. The national government occupational pensions for public sector workers are directly integrated with benefits under the basic universal and earnings-related pensions. Denmark, Finland, and Norway have special public employee systems that are integrated with their respective universal pensions and which parallel supplementary private sector employment-related pensions. Canada has a three-tier system. The first tier is a government-financed universal pension; the second tier consists of earnings-related pensions supported by employer and employee contributions; private pension plans, which include separate public employee plans, provide the third tier.

In 1975, to summarize, the International Social Security Association surveyed 80 countries and found that 64 have separate systems that protect public sector employees against at least one risk among these: old-age retirement, disability, death, medical expenses, and unemployment. The remaining 16 countries cover public employees for all risks under the general social security scheme.

III. BACKGROUND FOR ANALYSIS

This report features analysis of selected options for making changes in the current Civil Service Retirement System (CSRS). At the present time, virtually all Federal programs are under review for the purposes of assessing anew the extent of the Federal responsibility and commitment to ensure overall program equity. This section reviews features of the CSRS that are being subjected to review and presents other information helpful in considering the four options for restructuring the CSRS discussed at length in Chapter IV.

This part of the report begins with a short discussion of the question of total compensation. Some official commissions and agencies have stated that overall retirement benefits should be considered in the context of overall compensation of Federal workers compared to those in the private sector, taking into account the total of retirement benefits, basic pay, and other fringe benefits. While this idea has conceptual appeal, there still exist certain methodological difficulties which preclude such definitive evaluations at this time. However, total compensation comparability bears importantly on all issues concerning Federal compensation and the issue will be discussed briefly here.

A discussion follows of some of the features of pension plans in general which will be useful later in analyzing the options for changing the CSRS. Ways in which private pensions are integrated with social security are discussed, as are the two major types of pension plans. Then the concept of "earnings replacement rates," an important measure of the adequacy of retirement income benefits, is discussed. A brief description of the impact of inflation on fixed pension benefits completes this section of the report.

The next section discusses levels and trends of overall program costs in the CSRS. A brief comparison of the cost of the CSRS with the cost of private sector pension plans is presented, followed by an analysis of the features of pension plans, and particularly CSRS, which most importantly affect their cost.

Finally, recommendations made by various official commissions and advisory councils to cover Federal workers by social security are described. Arguments against such coverage by those in opposition are presented. This section concludes with a discussion of some of the major transition issues to be decided if Federal workers were to be covered by social security.

TOTAL COMPENSATION ISSUES

The ongoing total compensation debate is over whether the basic comparability concept undergirding Federal white-collar pay systems should be expanded to include comparison of Federal benefits as well. The objective is to assure comparability between the total of Federal pay and benefits and the total of non-Federal pay and benefits. There are good arguments in favor of implementing a total compensation program for Federal employees, but there are also telling arguments about the difficulties in implementing the concept. Many of the opposition arguments, in fact, focus on methodological problems while conceding the basic merit of the total compensation concept.

The total compensation concept was the single most important element of the pay reform legislation proposed by former President Carter in the 96th Congress and is the centerpiece of President Reagan's pay reform proposal now before the 97th Congress (S. 838, H.R. 1340). Under these proposals, the Office of Personnel Management (OMP) would estimate how much private sector benefit programs would cost if their benefits were offered to Federal employees. This cost, in turn, would be compared with the standardized cost of current Federal benefits. The difference, when considered with similar comparisons of pay, indicates the size of the adjustment needed to have total Federal compensation comparable to that in the private sector. Benefit packages frequently considered for comparison purposes are retirement, health and life insurance, annual and sick leave, and paid holdiays. It is estimated that these 6 major benefits comprise about 90 percent of most private employers' benefit programs.

The present law governing Federal white-collar pay adjustments is the Federal Pay Comparability Act of 1970 (Public Law 91-656). Under this Act, the authority to adjust white-collar pay has been delegated to the President by the Congress. No similar delegation has been made for Federal employee benefits. Congress determines each benefit and benefits can generally be altered only by legislation enacted by Congress.[6]

Support for the principle of total compensation has come from the private sector as well as from certain public administration and reform groups. Supporters include the American Compensation Association, the U.S. Chamber of Commerce, and a long line of study groups ranging from President Johnson's 1965 Special Panel on Federal Salaries to the 1976 Rockefeller Panel on Federal Compensation. OPM, a strong advocate of total compensation, has developed methods to compare private and Federal benefits and has tested an operational model for implementing such comparisons.

In 1980, however, the Congressional Budget Office (CBO) studied the total compensation concept as a part of its review of the Administration's pay reform bill. CBO found that no "definitive analysis" of fringe benefits exists and that information on private benefit programs is scattered and fragmentary. Benefit comparisons are further complicated by the fact that there is no overall uniformity either between or among public or private sector benefits. Problems also exist in data collection in the private sector because numerous employers are unwilling to make company records available for Federal scrutiny. Thus, CBO concluded "it is not possible to determine whether Federal employees currently receive more or less compensation in the form of fringe benefits than they would if practices typical to the non-Federal sector were adopted."

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[6] See Appendix E for a discussion of legal issues relating to legislative modifications of the Federal Civil Service Retirement Act. The U.S. Supreme Court has held that a pension granted by the Federal Government confers no rights which cannot be revised, modified, or recalled by subsequent legislation.

There has been opposition to the notion of basing Federal pay on a comparison of total compensation. Foremost among the opponents have been the Federal employee unions. The American Federation of Government Employees, the National Association of Government Employees, and the National Federation of Government Employees have all criticized proposed total compensation schemes as unfair and unworkable.

The key element necessary to determine total compensation is a credible method of determining and comparing the relative value of benefits in the private and public sectors. The General Accounting Office (GAO) has concluded that OPM's methodology for determining total compensation needs to be modified and more accurately verified. Depending on what benefits are considered typical of the private sector and how they are determined, GAO finds that Federal benefits range from 2.8 percent of pay below the private sector to as much as 7.4 percent above.

In view of these various problems, GAO has proposed an alternative approach. This would be to implement a total compensation comparability system that provides for separate pay and benefit adjustments for the first few years. GAO suggests this as a transitional approach with the goal of progressing to a single-standard method.[7]

Designing Supplementary Pension Plans

A wide range of public and private pension plans is already coordinated with the social security program. The experiences of these other plans would be instructive if CSRS is restructured to supplement social security. Certain factors in the design of a retirement benefit program which bear directly on private sector employers do not necessarily affect the Federal Government, such as the provisions mandated by the Employee Retirement Income Security Act of 1974 (ERISA). The Federal Government, nonetheless, shares many of the same concerns as private employers in designing and maintaining an employee benefit program.

In the sections that follow, four facets of designing a supplementary pension plan are outlined. The rationale for integration with social security is explored and the relative advantages of defined benefit versus defined contribution plans are compared. The criterion of replacement rates as a measure of benefit adequacy is introduced and the various effects of inflation on pension plans are indicated.

PENSION PLAN INTEGRATION

A great many employers establish private pension plans which are coordinated with social security so that a desired overall level of retirement income can be anticipated. Without "integrating" the plan in some fashion, social security's relatively larger value for lower-paid employees prohibits an equitable balancing of benefits and costs for employees at all pay levels. Since social security benefits are weighted in favor of lower-income workers, pension plans are permitted to "counter-weight" or "tilt" their benefits in favor of higher-income workers.

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[7] U.S. General Accounting Office. Problems in Developing and Implementing a Total Compensation Plan for Federal Employees; Report to the Congress by the Comptroller General of the United States. FPCD.81-12, Dec. 5, 1980. Washington, 1980. p. 43.

A nonintegrated plan is one that provides the same benefits (same formula, dollar sum, or percentage of earnings) for all employees independent of social security. The relative value of nonintegrated benefits is the same for all employees with the same period of service regardless of their earnings; however, in terms of replacement rates, lower paid employees benefit from these plans since the benefit is in addition to the social security benefit which is tilted in their favor.

DEFINED BENEFIT VERSUS DEFINED CONTRIBUTION PLANS

An employer has a choice of adopting one of two basic types of pension plans—a defined benefit plan or a defined contribution plan. Within each basic type there are many variations.

A defined benefit plan has a definite formula for determining the amount of the retirement benefit. When an eligible employee retires, the benefit is frequently based on length of service and recent earnings experience. Almost all public employee retirement plans, including CSRS, are defined benefit plans.

An advantage of a defined benefit program is that specific benefit objectives or targets can be set. Another advantage is that it is easier to provide supplemental benefits such as disability and survivor benefits under a defined benefit plan. Employers can, moreover, retroactively grant credit for employee's service prior to the establishment of the plan. On the other hand, there are certain disadvantages inherent in defined benefit plans.

Employers providing defined benefit plans might find it necessary to increase their contributions if there are unfavorable differences between actual and anticipated plan experience. For example, if investment performance is lower than expected or if salaries rise higher than anticipated, employers may be required to increase their contributions to the plan. This contrasts with the situation under a defined contribution plan, where the employer's costs are fixed.

A defined contribution plan is essentially a savings plan. Usually the employer contributes an amount equal to a certain percentage of the employee's earnings each year. When an eligible employee retires, the balance of the individual's account, including interest, is used to provide an annunity.

The advantage of a defined contribution plan to employers is that they know exactly what the pension obligation is and, by the very nature of the plan, the benefits are fully funded at the time the contribution is made. The employee bears the risk of variable market performance—benefiting from favorable markets and losing from unfavorable markets. As a result, the ultimate benefit to be received is not and cannot be prescribed with certainty.

REPLACEMENT RATES

Replacement rates—the ratio of retirement benefits to preretirement earnings—provide one measure of the adequacy of pension benefits. Because retirement also means changes in consumption patterns, tax liabilities, and savings rates, most analysts agree that retirees can maintain their preretirement standard of living with pension benefits showing a replacement rate of less than 100 percent. The President's Commission on Pension Policy produced estimates of the percentage of gross preretirement income that would need to be replaced for different earners covered by social security to maintain their preretirement standard of living. The Commission estimated, after making adjustments for changes in tax liability, work-related expenses, savings and investments, that replacement rates ranging from 51 percent to 86 percent would provide retirees the same standard of living as before retirement in 1980—depending upon income and living arrangements.

TABLE 4.—RETIREMENT INCOME REPLACEMENT RATE NEEDED TO MAINTAIN PRERETIREMENT STANDARD OF LIVING—1980

Gross preretirement income	Single person	Married person
$6,500	0.79	0.86
$10,000	.73	.78
$15,000	.66	.71
$20,000	.61	.66
$30,000	.58	.60
$50,000	.51	.55

Source: U.S. President's Commission on Pension Policy. Coming of Age: Toward a National Retirement Income Policy. Feb. 26, 1981. Washington, 1981. p. 42-43.

The Commission estimates indicate that a 5 percent increase in retirement income is needed to cover the difference in expenses between single and married households. However, the choice of survivor annuities in CSRS actually reduces the retirement income replacement rate, while social security benefits, on the other hand, are increased by 50 percent for married couples.

IMPACT OF INFLATION

Retirees' standards of living may deteriorate over time unless their pension benefits are adjusted for inflation. The following table shows the purchasing power of a $100 fixed pension benefit over time under various inflation rates. While a 5 percent inflation rate reduces a benefit by 60 percent over 20 years, a 10 percent rate erodes benefits by 85 percent.

TABLE 5.—PURCHASING POWER OF $100 OF FIXED-PENSION BENEFITS UNDER VARIOUS RATES OF INFLATION

Years after retirement	Inflation rates—percent												
	3	4	5	6	7	8	9	10	11	12	13	14	15
1	97	96	95	94	93	93	92	91	90	89	88	88	87
2	94	93	91	89	88	85	84	83	81	80	78	77	76
3	92	89	86	84	81	79	77	75	74	71	69	68	66
4	88	85	82	79	76	74	71	68	66	64	61	59	57
5	86	82	78	75	71	68	65	62	60	57	54	52	50
6	84	79	75	70	67	63	60	56	53	51	48	46	43
7	81	76	71	67	62	58	55	51	48	45	42	40	38
8	79	73	68	63	58	54	50	47	43	40	38	35	33

TABLE 5.—PURCHASING POWER OF $100 OF FIXED-PENSION BENEFITS UNDER VARIOUS RATES OF INFLATION—Continued

Years after retirement	Inflation rates—percent												
	3	4	5	6	7	8	9	10	11	12	13	14	15
9	77	70	65	59	54	50	46	42	39	36	33	31	28
10	75	68	61	56	51	46	42	39	35	32	29	27	25
11	72	65	58	53	47	43	39	35	32	29	26	24	22
12	70	63	56	50	44	40	36	32	29	27	23	21	19
13	68	60	53	47	41	37	33	29	26	23	20	18	16
14	66	58	51	44	39	34	30	26	23	20	18	16	14
15	64	56	48	42	36	32	27	24	21	18	16	14	12
16	63	53	46	40	34	29	25	22	19	16	14	12	11
17	61	51	44	37	32	27	23	20	17	15	13	11	9
18	59	50	41	35	30	25	21	18	15	13	11	9	8
19	57	47	40	33	27	23	19	16	14	12	10	8	7
20	55	46	38	31	26	21	18	15	12	10	9	7	6

Under certain conditions there can be a significant time interval between when a worker terminates a job and begins drawing a pension. During periods of inflation, the value of the pension can be seriously eroded because most pension benefits are "frozen" at the time of termination of employment. Mobile workers are particularly affected by preretirement inflation and may receive significantly lower pensions than workers remaining with one employer throughout their careers—even if they are always covered by a pension plan providing the exact same benefit formula on each job.

The salary base upon which the pension formula is based plays an important part in determining the amount of the benefit payable under a defined benefit plan. With wages rising over time, a pension based on the final few years' earnings would result in higher benefits than a benefit based upon unindexed or nominal career average earnings. Given that wages tend to rise with inflation and productivity gains, some form of final average pay formula provides a surer method of replacing a designated proportion of preretirement income than one based upon earnings averaged over a long period of time.

Full indexation of social security lessens the urgency for indexed pension benefits from other programs and tends to change the balance between different types of retirement income, with social security becoming more dominant.

PROGRAM COSTS

Much of the current interest in restructuring the CSRS arises from and raises anew questions of cost. The cost issues are discussed below from a variety of perspectives. The current level of CSRS costs, how these costs are funded, and how CSRS costs and replacement rates compare with private sector pension plans are examined. The inquiry then focuses on the two key factors influencing CSRS costs: cost-of-living adjustments (COLA) and optional retirement at age 55.

Perhaps the primary question raised by the current interest in restructuring CSRS is the level of costs under the present system and, more to the point, the impact of these costs on the Federal

Unified Budget. In fiscal year 1970, the difference between disbursements of the fund and employee contributions to the fund amounted to just over $1 billion. By fiscal year 1980, employee contributions had more than doubled from $1.4 billion in 1970 to $3.65 billion in 1980, but the net budget effect, or the difference between outlays and employee contributions, had risen 11 times from $1.01 billion in 1970 to $11.29 billion in 1980. In addition to the increased annuitants on the rolls (from 960,000 in 1970 to 1,675,000 in 1980), much of the increase in net budget effect is attributable to the effect of real salary growth and price increases on benefits and salaries.

The current level of CSRS costs is perhaps best seen in comparison with private sector pension plans. In their 1981 Total Compensation Comparability Study, the Office of Personnel Management (OPM) estimated that the net cost to the government of providing current CSRS benefits is 29 percent of payroll (total of 36 percent less 7 percent contribution by employees) and that the cost of providing typical private sector pension benefits (including social security benefits) to the Federal workforce would be an estimated 16.7 percent of payroll. OPM also estimated the cost of providing certain secondary benefits, such as profit-sharing, thrift, savings, and stock option plans, to be an additional 3.8 percent of payroll. The Congressional Budget Office (CBO) has estimated in its report on compensation reform for Federal white-collar employees that if the Federal Government adopted private sector retirement practices, the savings in fiscal year 1979 alone would have been $1.6 billion.[8]

Another method of comparing private sector and CSRS benefit levels is to compare gross replacement rates, the rate at which workers' benefits replace their final gross earnings. The average replacement rate for all of the 1.2 million civil service retirement annuitants (excluding disability retirees) on the rolls in 1980 was 50.65 percent of final average salary (High-3). The average replacement rate for new non-disability annuitants added to the rolls in 1980 was 54.45 percent of final average salary. Actual median replacement rates in the private sector for married men retiring in 1973–74 has been estimated to be 52 percent, with social security replacing 31 percent of preretirement earnings and a private pension replacing the remaining 21 percent.[9] (Other studies based on hypothetical work histories tend to set the replacement rates for social security somewhat higher.)

Based on this comparison of replacement rates, a conclusion can be drawn that Federal workers immediately after retirement receive benefits approximately comparable to the average retiree in the private sector. This, in turn, suggests that the high cost of Federal pensions may be due, in large part, to: (1) cost-of-living adjustments (COLA) which occur after retirement and (2) full retirement benefits at earlier ages for Federal workers.

Most recent proposals for restructuring the CSRS to control costs have focused on COLA and age at retirement.

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[8] U.S. Congressional Budget Office. Compensation Reform for Federal White-Collar Employees: The Administration's Proposal and Budgetary Options for 1981. Washington, U.S. Govt. Print. Off., 1980.

[9] Fox, Alan. Earnings Replacement Rates of Retired Couples: Findings From the Recent Retirement History Survey. Social Security Bulletin, v. 42, Jan. 1979. p. 17–39.

Annuities paid by CSRS are adjusted annually. This feature protects the purchasing power of CSRS benefits from erosion by inflation. This protection is very valuable to annuitants who generally have limited opportunities to increase their retirement incomes; it is also very costly to the Federal Government in times of rapid inflation.

Automatic COLA are generally absent from private sector plans as formal plan benefits. A recently completed study shows that about 8 percent of private sector plans include full COLA.[10] Ceilings on COLA increases limit periodic adjustments to 3 percent or less for over 60 percent of these covered participants. A more common practice among private plan sponsors is to make ad hoc increases of retirees' annuities. These increases are generally less than the full CPI, generally averaging 3 percent per year. An estimated 60 percent of plan sponsors use this method of protecting the income of their retired workers. Most private sector plans which cover white-collar workers, however, are integrated with social security and their retirement benefits are protected from inflation to varying degrees (workers with higher wages receive less protection) by their fully indexed social security benefits.

A related issue is the effect of COLA on the retirement decisions of the active workforce. During the last few years, Federal retirees' fully indexed benefits have risen faster than the salaries of active workers. This erosion of salary combined with the cap on the pay of top Federal executives has resulted in a situation where workers lose future annuity value with each COLA. The number of eligible persons who elect to retire has increased substantially in the past 2 years. At the beginning of fiscal year 1979, roughly 20 percent of employees at the pay cap who were eligible for optional retirement did retire. By August 1980, 67 percent of those eligible had chosen to retire. This combined effect of the COLA and the pay cap is even more pronounced for workers between ages 55 and 59, where over 90 percent of those eligible chose to retire.

Provisions for optional retirement at age 55 add to the cost of pension plans in two ways. First, on average the present value of future benefits is larger for retirees at age 55 than for those who retire at 65. Second, the interval between initial employment and retirement is decreased, leaving less time over which to fund the pension and less time for the pension fund to earn interest.

While most public and private pension plans provide for early retirement at age 55, annuities under the large majority of these other plans are substantially reduced. Under CSRS, optional retirement without reduction is available at age 55 with 30 years of service. Private pension plans commonly provide for early retirement with an annuity which is reduced, but by less than an actuarial reduction, at age 55 with 10 years of service. Slightly less than half of these employers provide for full retirement benefits prior to age 65, but most impose a reduction below age 62.

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[10] Hay Associates. 1981 Non-Cash Compensation Comparison.

SOCIAL SECURITY COVERAGE [11]

If the Congress decided to do so, there would be several ways to change the CSRS, depending on the objectives sought. The options considered in this report include changes in benefit eligibility and amount, mainly designed to show how such changes could control costs. In addition, options are analyzed which deal with the issues in the current CSRS by integrating it with the social security program. This is usually referred to as being "covered" by social security and essentially would consist of Federal workers participating in the social security program by paying taxes and receiving benefits—with an additional special pension program (financed by the Federal Government as employer) much as is the case in the private sector.

The question of social security coverage for Federal workers has often been proposed, unsuccessfully, in the past.

During consideration of the 1977 Amendments to the Social Security Act, the House Ways and Means Committee proposed extending social security coverage to noncovered government and nonprofit employees, effective January 1, 1982. This provision was deleted on the floor of the House of Representatives. In its place, Congress directed the Department of Health, Education, and Welfare (now the Department of Health and Human Services) to conduct a study of the desirability and feasibility of covering all noncovered public and private employment. At about the same time, the 1979 Advisory Council on Social Security, the National Commission on Social Security, and the President's Commission on Pension Policy—separate groups set up to study the issues in social security and pension programs—finished their work and all recommended bringing noncovered employees into social security.

RECENT RECOMMENDATIONS FOR COVERAGE

In March 1980, the Universal Social Security Coverage Study Group released its report, the result of a 2-year study of the desirability and feasibility of extending social security coverage to all noncovered workers. The Study Group Report made no recommendations, but its chairman publicly endorsed coverage of noncovered workers. The report emphasized that it was the first study to quantify the issues. It contained substantial empirical data on the consequences of permitting some employment to remain outside the social security program as well as data on the effects of several options for action on the issue.

The Study Group analyzed maintenance of the status quo, increased incentives for voluntary participation, options for mandatory coverage, and alternatives to coverage that would close insurance gaps and reduce so-called "windfall" benefits. The Study Group rejected any options that would merge funds between noncovered retirement systems and social security, that would change the benefits received by current annuitants, or that would unreasonably reduce the benefits expected by current employees.

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[11] Appendix C contains additional information concerning the coverage of Federal workers by social security. Certain problems of two parallel retirement systems, such as "windfall" benefits, are discussed. In addition, changes in other programs which would be necessary in the event of social security coverage are also discussed.

The report concluded that mandating social security coverage would significantly improve the protections provided to many public employees and their dependents, would improve the portability of pension protections, and would resolve the windfall benefits and gaps in coverage issues (see discussion of windfall benefits in appendix C).

The 1979 Advisory Council on Social Security reviewed all aspects of the social security program and published its report in January 1980. Like the Advisory Councils in 1938, 1948, 1971, and 1975, the 1979 Advisory Council concluded that all employment should be covered by social security if national income security goals are to be achieved fully and equitably. Extension of coverage was recommended to reduce the incidence of windfall benefits and to assure a minimal standard of protection for all workers and their families. The Council recommended that social security coverage be extended to Federal employees either through mandatory coverage for new hires, with optional participation for current employees, or through a plan permitting transfer of service credit between social security and noncovered retirement systems. The Council held that the combined protections of social security and a supplemental plan should be at least equal to present protections.

The final report of the President's Commission on Pension Policy in February 1981, set forth broad, long-range retirement income goals for the Nation, including social security coverage of all new workers not now covered, except for members of certain religious groups. The Commission recommended that Federal retirement programs have a retirement age policy parallel to that of social security. The Commission felt that the existing systems should be modified to take into account the benefits available under social security, that those currently retired or eligible for retirement should not be affected, and that immediate action be taken to eliminate insurance gaps and windfall benefits.

The National Commission on Social Security, an independent bipartisan panel of private citizens, conducted a 2-year review of all aspects of social security and reported its conclusions in March 1981. The Commission concluded that the social security system is the best way to provide retirement security for the Nation. With respect to Federal employees, the Commission recommended the extension of social security hospital insurance, on a mandatory basis, to all government employees in 1982. It also recommended the extension of full social security coverage to any government employee not under a retirement plan in 1982 and to all new government employees in 1985. The Commission proposed the creation of a Federal Employees Benefit Protection Board to aid the implementation and coordination of social security coverage with existing plans to assure that new employees' protections would not be less than those provided for current employees. The Commission did not, however, recommend a specific approach to coordination.

PROBLEMS RESULTING FROM COVERAGE OF FEDERAL WORKERS BY SOCIAL SECURITY

Opponents to covering Federal workers by social security maintain that this would not be in the best interests of either the public or the public's employees. They argue that the change would hurt the public because, in their analysis, it could increase the cost of CSRS, hamper recruitment and retention of civil servants, and delay other, more important retirement reforms. These opponents maintain, further, that social security coverage would break faith with past and present public employees and would inevitably erode the value of CSRS benefits. They hold that, for the most part, the present system is working well and therefore ought to be left alone. They are unmoved by claims made of preferential benefits received by Federal retirees, arguing that the public sector should be a model for the private sector to emulate.

The argument that covering Federal workers by social security would cost more takes two forms. First, from the perspective of Federal workers and retirees, the only compelling reason for such a change in the current system would be to provide better protection for more workers. And, no matter how one juggles the numbers, better protection for more workers must, in the long run, cost more. Second, costs would increase because substituting tax-free social security benefits for taxable CSRS benefits would reduce the Federal tax base.

The argument that covering Federal workers by social security would hamper recruitment and retention of Federal workers rests on the widely held belief that Federal fringe benefits, in general, and the CSRS retirement package in particular are important inducements for persons to enter and stay in public service. While there are no definitive studies of the motivations of persons who enter and leave public service, the possibility of social security coverage would raise the issue of cuts or delays in benefits and the ensuing discussions of cuts or delays, whether they were adopted or not, would tend to undermine the confidence some workers have in the system. Such uncertainty might well diminish the attractiveness of Federal employment for some persons.

The argument that social security coverage would delay other and more important retirement reforms is central to the opposition of Federal workers. Federal workers argue that while CSRS is now adequately funded for the foreseeable future, social security is not. Thus, they argue that any plan for changing the sound CSRS that involves coverage under the shaky social security system amounts to little more than throwing good money after bad.

The argument that social security coverage would break faith with public employees requires some discussion. All Federal workers have received pay increases that do not keep pace with inflation, and some senior civil servants have had no pay increases in several years due to pay caps; CSRS and other fringe benefits, as deferred pay, are seen as making up the difference or at least compensating Federal workers for their depressed wages. If budget constraints now mean that changes in CSRS would result in reduced or delayed benefits, then Federal workers will claim that their employer has reneged on long-standing commitments. In the absence of full collective bargaining rights, Federal workers' relationship with their employer is based on credibility and honor; reducing CSRS may damage that relationship.

The argument that restructuring CSRS would inevitably erode the value of CSRS benefits underlies the concern of many Federal workers and retirees. Such coverage would, they fear, not allow them to withdraw their contributions to the system when they leave public service prior to retirement or would severely tighten eligibility standards for disability and early retirement or would strip away some hard won occupationally specific benefits for, say, hazardous duty personnel. Even if the new system should cover only new employees, the workers continuing under the old CSRS would be threatened by the competition from the new system: a new and an old CSRS would divide the workforce and, over time, the dwindling number of workers under the old system could find that their interests were more likely to be neglected.

Defenders of the present system reject and resent the reasons usually advanced for social security coverage. They argue, for example, that if receipt of windfall benefits by Federal workers under social security is a problem, Congress should go to the source of the problem and change social security. To the charge that Federal workers do not pay their share of the redistributive costs of social security, they point out that Federal workers already contribute to social programs through income taxes on both their current wages and their CSRS benefits.

Federal workers and retirees, largely opposed to social security coverage, do acknowledge that the current system could be improved. Survivor and disability benefits, for example, could be modified to better protect the families and dependents of Federal workers. All CSRS benefits could be made tax-free like social security benefits.

Federal workers and retirees, in summary, tend to oppose social security coverage because they have seen no reason to believe that such changes would be in their best interests. In fact, changing their well-financed retirement system at this time appears to threaten their current benefits and to undermine their relationship with their employer. In the end, they argue, these proposals would not only postpone critical improvements in social security, but would also tend to divide the Federal workforce against itself. For these reasons and others, they conclude that social security coverage can only make public service less attractive and that the public will therefore be the ultimate loser.

TRANSITIONS

The social security coverage options developed for discussion in this report assume that only employees hired after the effective date would be affected. Many employees are opposed to social security coverage, believing that the result would be a system less attractive and less secure than the current CSRS. Covering only new employees assures current employees that expected benefit rights remain in force.

Maintaining the current CSRS for all current workers is not without drawbacks. A 75-year period of time would transpire before the last survivor of the last retiree died, and in the meantime, the Federal Government would be responsible for administering two separate plans. Any savings resulting from changing CSRS would also be phased in over a longer period. Benefit improvements, especially those resulting from changes to vesting rights and disability protection, would not be extended to current employees.

If the new plan were restricted to "new hires" only, employees working side by side, identical in all relevant respects other than length of service, could have substantially different retirement and disability income protection. (However, even if only new employees were required to be covered by social security, current employees could be allowed to join the new system voluntarily.) Employees in the new system could believe that compensation dollars were flowing to benefits to which they could not become entitled. Employees remaining in the current system could believe that their diminishing numbers would make their benefit rights vulnerable, as attention was paid to the interests of the growing percentage of employees in the new plan. Thus, this disparity in pension rights could be seen as eventually pitting the interests of a growing number of younger workers against the interests of a declining number of older workers and retirees. As the ratio of employees covered by each of the two systems began to shift, pressures could develop to combine the two systems.

Such a shift in the numbers participating in the two systems would shift in favor of the new social security coverage system relatively soon, even though it were set up for new employees only. According to data developed by the Universal Coverage Study Group, slightly more than one-half of new Federal employees stay as long as 10 years; about two-fifths stay for 20 years.

There are two basic alternatives to restricting participation in a new system to new employees only. An option could be provided that would permit current employees to transfer credits to any new system. If such a transfer were completely voluntary, adverse selection might occur; that is, it could be that only those employees with something to gain under the new system would choose to change, and that would increase costs. Alternatively, incentives could be formulated to encourage current employees to participate in a new system. Such incentives are most easily created under Option 2, which replicates the present structure and involves less change. Stronger incentives would be needed under Options 3 and 4. Incentives to transfer to a new system could be developed through refund of an employee's CSRS contributions up to that time and a crediting of past Federal service to the new system. An incentive to remain under CSRS could be removed by the elimination of windfall benefits. Further, disincentives for remaining in the CSRS could be created through some scheme which would trigger automatic coverage by a new system upon some change in status, such as promotion.

On the other hand, coverage in the new system could be made mandatory for some segment of current employees. Regardless of how the segment were defined, if some current workers were brought into the new system, transition time would be shortened, any savings would be realized sooner, and any benefit advantages would be provided earlier. If a transition including current workers were adopted, presumably all current benefit rights earned up to the effective date would be frozen. Under this transition mechanism, benefits earned to the effective date under the present plan and benefits earned after the effective date under the new plan would be calculated at retirement using the formula appropriate to each plan. These two benefits would then be added.

IV. ANALYSIS OF OPTIONS

INTRODUCTION

Opponents of changing CSRS argue that the present system can be defended on several grounds: (1) by providing career employees an inflation-proof benefit that replaces a substantial portion of their preretirement earnings, CSRS is an important personnel tool of the Government as employer; (2) by providing a range of benefits to compensate for the absence of social security coverage, and by granting benefits at various retirement ages, CSRS is generally comparable to and competitive with the income protection an employee would receive by working a full career in private sector employment; and, (3) by establishing these benefits, CSRS has created retirement expectations that are not only justified, but are an essential component of the employment agreement between the Federal Government and its employees.

However, critics of CSRS suggest that certain consequences of the present structure may be undesirable: (1) some employees remain employed only long enough to become eligible for benefits, and then retire, because in recent years retirement income has gone up far faster than salaries of active employees. This retirement incentive causes a drain of valuable and experienced employees and expands the retirement rolls; (2) over one-half of all new employees leave government without drawing a benefit. Nearly all of these workers receive no value whatsoever from CSRS. Because Federal employment is not covered by social security, these employees have earned no income protection in their years of Federal employment; (3) because Federal employment is not covered by social security, many workers can earn enhanced benefits from that program through prior, post, or concurrent employment even though that enhancement is intended for low-income workers and is paid for by all other social security participants; and (4) in the absence of social security coverage, Federal workers are often not adequately protected for disability, especially if they have dependents, or have been in their government jobs for a short time. Also, CSRS coverage ceases with separation from Federal employment, leaving some workers temporarily without disability or survivor protection.

In addition, it is often asserted that CSRS needs to be changed because it costs too much. Proponents of this view normally specify one of three things: (1) the level of taxation needed to support the benefits is too high and is therefore politically intolerable; (2) the structure of CSRS is too liberal compared to prevailing private plan practice, presumably in the provisions for early retirement and cost-of-living adjustments; and (3) the cost of the present structure is too high to permit improvements that are sometimes advocated and which could be made if costs were lower.

OBJECTIVES IN DEVELOPING OPTIONS

CRS was requested to develop, analyze, and price options for restructuring CSRS that: (1) controlled future costs in CSRS; (2) protected interests of retirees and current workers; (3) included coordination with social security; (4) provided opportunities for voluntary employee contributions; (5) increased employee involvement in retirement planning; and (6) considered all aspects of the Federal employee compensation package.

For purposes of analysis, four options to the current system were developed which to varying degrees result in long- and/or short-term savings. While necessarily somewhat arbitrary, these options are representative of a broad range of possibilities for restructuring CSRS and provide benchmarks for measuring the impact of various changes. Specific provisions of the options can be changed to increase or decrease costs of benefit levels, and such changes can be recalculated using the options as a base.

Some of these options do more than save money by changing Federal retirement to reduce benefits or limit benefit growth. In these options, some changes to the structure result in improved benefits for certain categories of employees. There are changes that provide greater benefits to employees in the lower grades, including postal employees. Other changes improve income protection and vested rights for workers who leave government employment before retirement. Generally, the options provide somewhat better disability benefits, especially for fully disabled workers with families. Finally, some of these options introduce a larger element of choice into Federal employee retirement planning.

In order to make analysis of the options manageable, CSRS is the only Federal civilian retirement system discussed. Similar restructuring vehicles could be applied to the other Federal civilian retirement plans. In addition, it was assumed that certain groups under CSRS with higher or otherwise more liberal benefits than the majority of Federal workers, such as hazardous duty employees and air traffic controllers, would retain their advantageous position in all options presented in this report.

Generally, the options can be grouped into two categories, one dealing with ways of changing the current system to reduce costs, the other integrating the retirement system with the social security system. Disability benefits are treated separately. Changes to the existing system result in short-term budget savings, while integration with social security is likely to result in lower short-term savings but substantial long-term savings.

These options are designed to serve a range of objectives. For instance, the variations in Option 1 were developed to illustrate the range of possible savings that could be achieved by changing early retirement, cost-of-living adjustments, and one of the salary-based features of the present benefit formula. By showing what these features cost, it is then possible to show what changes could be made to the system if that expenditure were redirected elsewhere in CSRS.

The general design of Option 2 is a defined benefit plan intended to replicate as nearly as possible the benefit structure of the present CSRS but to coordinate the system with social security. In this option it is possible to modify the present system to more closely resemble private plan practice, and to do so while preserving benefits available under the present system for full career employees.

Options 3 and 4 demonstrate more basic structural changes to CSRS following the two common plan designs: defined benefit and defined contribution. Options 3 and 4–A were intended to provide similar benefits for full career employees, but Option 3 would guarantee benefit levels, whereas benefits under Option 4 would depend on investment performance. Implications of these differences can then be shown for different income levels and different lengths of service at retirement or separation. Option 4–B then shows the effects on replacement rates and program costs of reducing Government contributions and employee savings incentives available in 4–A.

The interplay between CSRS, social security and personal investments or savings plays an important role in these options. Students of retirement planning have long argued that rational retirement implies that all three of these components—the "three-legged stool"—must be utilized to insure adequate income, personal choice, and an appropriate mix of individual and social responsibility. We have therefore included in some of the options features that would encourage employee savings.

These features take different approaches. The "thrift plan" approach encourages employee savings by providing matching government contributions for amounts employees voluntarily save. Individual Retirement Accounts (IRA) also encourage savings by providing tax advantages to workers who invest in them. These two features provide opportunities for workers to pay for early retirement or inflation insurance in options in which those benefits are missing or are smaller than desired by the employee.

This report does not attempt to portray what a properly balanced three-legged stool would look like. Instead, control features are provided which can be adjusted to achieve desirable results in level of costs, in short-term savings, in employee retirement planning and discretion, and in the distribution of Federal expenditures for employee retirement compensation.

Because these plan design variables involve complex interactions, it is impractical to do more than sample the range of available illustrations. For example, variations in salary have different effects under different options. There are also differences in replacement rates for the same salary but different retirement ages. Thus, the illustrations that follow are only a glimpse of some of the variations in these options which might be considered. Given specific objectives, a wide variety of illustrations or designs could be produced.

CHANGES TO THE CURRENT SYSTEM

OPTION 1

As has been pointed out, CSRS differs from a combination of a private plan and social security in two crucial ways. First, CSRS pays full and automatic cost-of-living adjustments on the entire benefit, while in non-Federal plans, usually only social security is fully adjusted. Second, while CSRS roughly approximates the combined pension and social security benefits received by many employees with full careers in private employment, CSRS beneficiaries can receive those benefits at age 55 with 30 years of service. While age 55 retirement provisions are not uncommon in private employment, they often result in reduced benefits. Furthermore, social security benefits are not payable until age 62, and full social security benefits are not payable until age 65.

All variations of this option would produce savings by modifying some features of the current system. *Option 1-A* immediately reduces inflation adjustments and phases in penalties for early retirement. *Option 1-B* immediately penalizes early retirement, but leaves all other features as they are. *Option 1-C* expands the salary base from 3 to 5 years in averaging high salaries, except for employees already eligible to retire.

Option 1-A. Variation A immediately reduces COLA from 100 percent of Consumer Price Index (CPI) changes to 70 percent. Adjustments would be applied annually. In private plans, with their need for predictable and controllable pension expenses, adjustments for inflation are usually ad hoc. Plans with periodic adjustments usually limit those increases to 3 percent per year or less. Private plan beneficiaries do receive full and automatic COLA on any social security benefits they receive. Yet, social security benefits are not available until age 62, with full benefits available at age 65, while CSRS benefits can be received, in some cases, much earlier. To evaluate the effects of changes to CSRS to make it more closely resemble private plan practice, Option 1-A assumes a reduced COLA of 70 percent of annual inflation as measured by the CPI. This 70 percent figure is taken to roughly represent the value of that portion of CSRS benefits comparable to social security, plus some adjustment to the remaining pension portion.

The following table displays short-term savings from the changes in Option 1.

TABLE 6.—SHORT TERM SAVINGS TO CSRS FROM OPTION 1

[In millions of dollars]

	Fiscal year—					Total
	1983	1984	1985	1986	1987	
Option 1-A	300	960	1,590	2,310	2,820	7,980
Option 1-B	90	250	450	650	880	2,320
Option 1-C	20	70	120	180	250	640

Source: Hay Associates

In Option 1-A, the annuity continually loses ground to inflation while under current law, annuities are restored to their full value (relative to prices at the previous adjustment) each time an adjustment is made. Thus, this change has significant short- and long-term savings. Each time the adjustment is made, it not only provides less than a full response to the applicable CPI measuring period, but each subsequent adjustment is to an annuity which was not fully adjusted the previous time.

If the rate of inflation is higher than has been assumed, savings would be higher than shown here in table 6. (See table 18, page 49 for interest rates assumed in table 6.)

Option 1-A also phases in penalties for early retirement by applying reduction factors for retirement under age 60. Because these reduction factors are applied beginning in 1990, they will have no short-term budget effects. However, penalizing early retirement does have long-term effects.

Option 1-B. This variation changes the age of eligibility for unreduced benefits except for employees already eligible to retire. Reduction factors eventually totaling 3 percent for each year under age 60 are added to the benefit formula, beginning in 1983 with 1 percent. Additional 1 percent reductions are added in 1988 and 1993.

Because these reduction factors are fairly low, in general they do not reduce annuity costs by providing lower annuities, but by inducing employees to delay retirement. By encouraging employees to retire later, Option 1-B reduces the number of retirees entering the rolls, and increases the span over which contributions are made to the system in their behalf. Option 1-B would substantially reduce the attractiveness of involuntary retirement during Reductions in Force (RIF).

Substantial savings under Option 1-B do not occur until the reduction factors begin to encourage larger numbers of employees to retire later than is predicted for the current structure.

Table 7 shows the long-term effect on CSRS costs of raising the age for unreduced benefits to age 60, as well as the effect on costs and benefits of limiting COLA to 70 percent of CPI changes.

These costs are presented as net level costs expressed as a percentage of payroll. Given the long-run accrual of benefit costs within a pension system, absolute dollar values can be misleading. Instead, the present value of all future benefits received by an entering group of employees is estimated, and divided by the present value of all estimated future wages earned by these same employees. This quotient is then the amount that would have to be set aside out of each year's payroll to fully finance all of the benefits. Thus, expressing these combined benefit rights as a percentage of payroll is a consistent, over time, technique for measuring pension costs.

TABLE 7.—COMPARISON OF OPTION 1 TO CURRENT SYSTEM: MID-LEVEL EMPLOYEE RETIRING AT AGE 55 WITH 30 YEARS OF SERVICE

	Replacement rate of final year gross earnings (at retirement) (percent)	Replacement rate of final year gross earnings (at age 70) (percent)	Net budget effect (billions in 1986)	Net level cost (percent of payroll)[1]
Current system	52.5	52.5		24.23
Option 1-A	44.6	37.3	$2.3	19.17
Option 1-B	44.6	44.6	.7	22.88
Option 1-C	49.8	49.8	.2	22.67

[1] Net level costs are the amounts that would have to be paid throughout their careers, to provide all benefits for an entering group of employees, minus any employee contributions.

Source: Hay Associates.

Note that as shown by table 7, Option 1-B reduces net level costs by 1.35 percentage points of payroll whereas Option 1-A reduces net level costs by 5.06 percentage points of payroll. This difference of 3.71 percentage points is the long-term savings of reducing COLA to 70 percent of CPI changes.

Option 1-C. This variation reduces the amount an annuitant receives at entitlement. This is accomplished by applying the formula to an expanded salary base of the average of the high 5 years of salary (High-5). The change from the current "High-3" reduces the effect on the salary base of salary increases near retirement, by averaging those increases over a longer period. The present formula favors employees with upward slopes in income to the date of retirement by basing the formula on a narrow range of high salary. Usually, highest salary occurs just before retirement. A narrower salary base produces an annuity more closely linked to final salary. Employees whose salaries have been relatively constant over 5 years would be less affected than employees with rapid increases near to retirement.

In the current CSRS, late career promotions and step increases have significant effect on the size of annuities. Thus, this change would reduce the effect on annuities of any increases in salaries because of a late career promotion, but would have no effect on the annuities of retirees whose incomes had been held at the "cap" in maximum salary for as long as 5 years. Option 1-C would not affect employees eligible to retire.

Tables 6 and 7 also show the effect of changes in Option 1-C.

COORDINATING CSRS WITH SOCIAL SECURITY

The following three options provide social security coverage for Federal employees and modify CSRS to accommodate that coverage. Under these options, CSRS would become noncontributory, that is, the government would pay the full cost of CSRS benefits. Employees would pay social security taxes on that portion of their salaries below the maximum taxable wage base. All of the following options apply only to employees hired after the effective date.

These three options were designed to be similar to each other in overall cost so that variations in design and effect on retirees could be more clearly shown. In general, Options 2, 3, and 4-A save between about 2 to 2.5 percentage points of payroll, expressed as net level cost, over the present structure. Option 4-B saves about 6 percentage points in level percent of payroll compared to the current system. In the short run, Options 2 and 3, after about $20 million dollars in additional costs in the first year, begin to save money in the second year after enactment. By the fifth year, Options 2 and 3 save about $250 million annually. Options 4-A and 4-B save money immediately, rising from $30 million in the first year to about $370 million for Option 4-A and $530 million for Option 4-B in the fifth year. Table 8 shows the short-term net budget effects of Options 2, 3, and both variations of Option 4. For more on costs of all options, see the analysis of costs, beginning on page 47.

TABLE 8.—COST EFFECTS OF SOCIAL SECURITY OPTIONS: REDUCTION IN 5-YR NET BUDGET OUTLAYS IF EFFECTIVE OCT. 1, 1982

[In millions of dollars]

	Fiscal year—					
	1983	1984	1985	1986	1987	Total
Option 2	(20)	50	100	180	250	560
Option 3	(20)	50	100	180	250	560
Option 4-A	30	160	230	310	370	1,100
Option 4-B	30	190	290	420	530	1,460

Note: Dollars in parentheses represent net cost.

Source: Hay Associates.

One way to measure the adequacy of retirement benefits is to compare retirement income with the salary an individual had before retiring. For most employees, retirement means changes in consumption patterns, tax liabilities, and savings rates. Because of the variation in tax treatment of benefits from different programs, and because retirement income is generally lower than preretirement salaries, net after-tax replacement rates are often better indicators of plan performance than gross replacement rates. For instance, social security is not taxable but CSRS benefits are; this factor has tremendous importance when comparing current CSRS benefits and benefits under any of these restructuring options. In the analysis of options in this section, net and gross replacement rates are shown where possible. A more thorough analysis of net and gross replacement rates can be found in Appendix A—Analysis of Earnings Replacement Rates.

OPTION 2

This option is designed to replicate the current structure of CSRS. Benefits are replicated under this option for average annuitants with 40-year careers at age 65. Optional retirement at 55 with 30 years of service is available. Retirement benefits are calculated using a salary base of average high 3 years salary (High-3). The revised benefit formula provides 1.5 percent of High-3 for each year of service. At age 62, retirees would receive social security benefits and the CSRS annuity would be reduced by a portion of the social security benefit. The reduction formula is equal to 1.25 percent of the basic social security benefit, for each year of service. This reduction is intended to mitigate the income redistributional effects of the social security benefit formula, which provides higher replacement rates for lower income workers. If the two benefits were simply added together without an offset, replicating benefits for employees in higher salary ranges would entail granting employees in lower salary ranges benefits in excess of 100 percent of their preretirement earnings.

An additional difference between this option and the current plan is that cost-of-living adjustments on the retirement and survivors' annuities would be limited to 70 percent of annual CPI changes. Preretirement survivor benefits would be available under social security only. Postretirement survivor benefits supplementing social security survivor benefits would be available but would be actuarially reduced.

Table 9 shows gross and net replacement rates for employees retiring at age 65 with 40 years of service under Option 2, and compares that plan performance to the current plan. The table also shows net replacement rate comparisons at age 80. Gross replacement at retirement was chosen because of wide difference in tax treatment of benefits at retirement. CSRS benefits do not become taxable until after annuities equal to total employee contributions have been received, a period of about 14 to 18 months. Social security benefits are not taxable. Net replacement at age 80 was chosen so that comparisons could be made after all relevant changes in taxes and effects of inflation had become applicable.

TABLE 9.—COMPARISON OF OPTION 2 WITH CURRENT CSRS: PERCENT OF FINAL SALARY REPLACED BY ANNUITY

[Age 65 with 40 yrs of service]

	Replacement of gross final year earnings (at retirement)		Replacement of net final year earnings (at age 80)	
	Current system	Option 2	Current system	Option 2
Low GS	72.3	75.3	85.1	94.1
Middle GS	72.3	67.0	89.5	91.7
High GS	72.3	66.6	89.3	91.3
Postal Service	72.3	74.9	85.8	95.6

Note.—An explanation of the sample General Service (GS) and Postal Service career wage histories may be found in Appendix B, Documentation of Replacement Rate Analysis, "Federal Career Samples," p. 80.

Source: Congressional Research Service.

Note that even though plan benefits are not fully inflation proof, because social security benefits are both inflation proof and tax free, net replacement rates at age 80, 15 years after retirement, are higher than those under the current plan.

It is also worth pointing out that while gross replacement rates under the current plan are the same across all income classes, higher income employees have higher net replacement under the current CSRS. These higher net replacements occur because higher income employees receive larger tax advantages from lowering their income tax brackets when they move from preretirement salary to postretirement annuities. Under Option 2, because of the social security "tilt," gross replacement rates have shifted in favor of lower income workers. After 15 years, although net replacement rates still favor lower income workers, the higher tax savings from pre- to postretirement income tax bracket reductions have resulted in a fairly even net replacement rate across all income levels. This is an intentional consequence of the Option 2 benefit design.

Because benefits at age 55 with 30 years of service are lower under Option 2 than under the current system, employees who wished to retire at 55 with 30 years of service with higher retirement income might want to save sufficient amounts over their careers to ensure a gross replacement rate similar to what they would have received under the present system. In addition, employees could also save amounts sufficient to protect the annuity against moderate inflation. Presumably, this savings opportunity would be provided by automatic payroll deductions and would be available under any option. Various investment strategies for this savings fund could be established. Table 10 portrays this opportunity, specifically calculated to accompany retirement under Option 2 with 30 years of service at age 55.

TABLE 10.—COMPARISON OF REPLACEMENT RATES: CURRENT CSRS AND OPTION 2; PERCENTAGE OF SALARY IN SAVINGS NEEDED TO REPLICATE CURRENT BENEFITS

[Age 55 with 30 yrs of service]

	Replacement of gross final year earnings (at retirement)		Replacement of net final year earnings (at age 70)		Savings plan annual-savings rate (to retirement)	
	Current system	Option 2	Current system	Option 2	Indexed (4 percent)	Nonindexed
Low	53.4	42.7	65.2	68.2	6.6	3.4
Middle	52.5	42.0	69.5	67.8	8.4	4.2
High	53.4	42.7	70.6	60.0	6.8	3.3
Postal	53.4	42.7	65.0	71.0	5.5	2.9

Source: Hay Associates and Congressional Research Service

Table 10 shows that employees wishing to retire early under Option 2, would need to save between 2.9 and 4.2 percent of their salaries over their careers to reach initial replacement rates equal to the current plan. If an indexed (4 percent annually) annuity is desired, employees would need to save nearly twice this amount. However, when the social security benefit became payable at age 62, replacement rates would rise sharply.

Because Option 2 is noncontributory, employees making more than the social security wage base would have additional disposal income to invest. However, observe that net replacement rates at age 70 under Option 2 nearly duplicate those of the current plan because of the receipt of social security and because of differences in tax treatment of benefits under the two systems. If a "career savings rate" feature had been selected, these retirees would have greater income at age 70 than under the current plan.

OPTION 3

Option 3 is a defined benefit plan coordinated with social security. The most significant difference between this option and option 2 is that under this option, the retirement age is extended to age 65 with 5 years of service. Early retirement with a reduced annuity is available at age 55 with 10 years of service; annuities are reduced 3 percent for each year the retiree is under age 65. The benefit formula for the normal retirement benefit produces a greater benefit for full career employees at age 65 than the formula in Option 2; however, cost-of-living adjustments are provided at a rate equal to 50 percent of annual CPI changes.

OPTION 4

This plan differs in significant ways from Options 2 and 3. All previously discussed options and the current system are defined benefit plans. Option 4 is a defined contribution plan designed to augment a social security benefit. Rather than defining the retirement benefit as a certain percentage of salary for each year of service, the retirement benefit in a defined contribution plan is the annuity purchasable by the balance of an individual's account. A formula is developed which specifies the annual contribution made to each individual's account. The formula is designed to meet certain benefit goals; however, these goals are not guaranteed.

The employer contribution formula in Option 4-A is 9 percent of salary up to $20,000 and 16 percent of salary over $20,000. This two part formula is designed to partially offset the redistributional effects of social security. Option 4-B is identical to Option 4-A except that the employer contribution to the basic plan is 7 percent of salary up to $20,000 and 14 percent of salary over $20,000.

In addition, Option 4 includes a thrift plan under which employees' contributions to their accounts are matched at least in part by employer contributions. Employees may increase their account balances, and therefore future retirement benefits, by contributing up to 6 percent of their salary to their account under the thrift plan provision. Under Option 4-A, the government matches each dollar contributed by the employee. Option 4-B is a lower cost variation. For every dollar up to 6 percent of salary the employee contributes to the thrift plan in Option 4-B, the government will contribute 50 cents.

In Option 4, retirement before age 65 will result in benefit reductions because contributions to the individual's account will have been made for fewer years and will have to provide income over a longer postretirement period. Retirement at an earlier age or with fewer years of service will result in the equivalent of a reduced annuity under the previous defined benefit options.

Table 11 compares replacement of gross final year salary for employees retiring under the various plans at age 65 with 40 years of service. The current system is fully protected against inflation and these gross replacement rates will remain constant over time. Option 3 assumes annual adjustments of 50 percent of CPI increases and thus replacements will fall as inflation erodes the value of the annuity. Options 4-A and 4-B, as shown here, assume 4 percent annual inflation adjustments after retirement. Both variations of Option 4 also assume an average of 50 percent full participation in the thrift plan included for demonstration in that option. Replacement rates shown for both variation of Option 4 are the value of all government contributions plus all social security benefits received by employees fully participating. The return on the voluntary employee contributions would raise those rates. Elaboration of the effects on replacement rates of thrift plan participation can be found below at table 14, page 42.

TABLE 11.—COMPARISON OF THE CURRENT CSRS AND OPTIONS 3 AND 4: REPLACEMENT OF GROSS FINAL YEAR PAY FOR EMPLOYEES HIRED OCT. 1, 1982 WHO RETIRE AT AGE 65 WITH 40 YEARS OF SERVICE AT RETIREMENT

[Includes social security benefit]

	In percent			
	Low GS	Middle GS	High GS	Postal Service
Current system	72.3	72.3	72.3	72.3
Option 3:				
(a) at retirement	84.7	76.5	76.1	84.4
(b) at age 80	72.6	62.2.	61.8	72.2

TABLE 11.—COMPARISON OF THE CURRENT CSRS AND OPTIONS 3 AND 4: REPLACEMENT OF GROSS FINAL YEAR PAY FOR EMPLOYEES HIRED OCT. 1, 1982 WHO RETIRE AT AGE 65 WITH 40 YEARS OF SERVICE AT RETIREMENT—Continued

[Includes social security benefit]

	In percent			
	Low GS	Middle GS	High GS	Postal Service
Option 4-A (indexed)[1]	85.9	76.3	88.8	93.5
Option 4-B (indexed)[1]	69.5	61.0	70.6	75.0

[1] Value of total Government contribution for employees who fully participate in the thrift plan, plus value of social security benefit. Indexed at 4 percent annually.

Source: Congressional Research Service.

Note that the "middle GS" employee does not do as well as other employees. This lower amount is a result of the "model" career history selected to represent that final income level. Because the model assumes continual advancement through the grades, investments produced by defined contributions have not built sufficiently to replace as high a percentage of gross final year salary, as for those wage histories that were assumed to be relatively stable for sustained periods of time.

In Option 3, replacement rates at retirement are higher than the current system, particularly for low income workers. This low income advantage is a consequence of the income redistributional aspects of the social security formula. In Option 4-A, a plan designed to be similar in cost to Option 3, replacement rates are also significantly higher than in the current plan but a wider spread exists across the various income levels. While much of the spread in replacement rates in Option 4-A is also due to the tilt in social security, other factors contribute to the differences in the spread between Options 3 and 4-A. Much of the variation across income levels in Option 4-A follows from the difference between defined benefit and defined contribution plans. In 4-A, higher values are generally a result of contributions sustained for a relatively constant level of income through the work career, as in the case of postal employees. In these cases, total contributions have reached high enough levels that substantial interest return has begun to work in behalf of the employee.

Table 12 illustrates a basic alternative in design strategy. In general, for the same total cost, defined contribution plans favor younger workers. Defined benefit plans provide guaranteed benefit levels and insulate the employee from the effects of investment fluctuation. Defined benefit plans are also easily modified to grant more credit for past service. The essential characteristic of a defined contribution plan is that accumulated contributions, plus any earnings, determine benefit levels. The essential characteristic of a defined benefit is that the formula itself determines benefit levels.

In the defined benefit plan in Option 3, larger gross replacement rates at all income levels can be provided for employees with fairly short periods of service than can be provided under the current system. However, because under Option 3 benefits are not available until retirement, a fairly generous short-term service benefit is of little value to employees working 10 years early in their careers.

Because Option 4 is a defined contribution plan, the value of accrued contributions—all of the employee's and all of the government's—plus any earnings could be withdrawn from the plan whenever employees left their Federal jobs. This opportunity would be a valuable feature for younger workers who leave Federal service.

Under the current system, workers leaving Federal service can withdraw only their own contributions. For more on this issue, see Vesting, especially table 15, page 44.

TABLE 12.—COMPARISON OF THE CURRENT CSRS AND OPTIONS 3 AND 4: REPLACEMENT OF GROSS FINAL YEAR PAY FOR EMPLOYEES HIRED OCT. 1, 1982 WHO RETIRE AT AGE 65 WITH 10 YEARS OF SERVICE AT RETIREMENT

[Includes social security benefit prorated for 10 yr service]

	In percent			
	Low GS	Middle GS	High GS	Postal Service
Current system	15.1	15.0	15.4	15.4
Option 3:				
(a) at retirement	22.9	20.8	20.8	22.7
(b) at age 80	19.6	17.0	16.6	19.2
Option 4–A (indexed)[1]	21.3	16.5	18.3	21.1
Option 4–B (indexed)[2]	17.1	13.3	14.5	17.1

[1] Value of total Government contribution for employees who fully participate in the thrift plan, plus prorated value of social security benefit. Indexed at 4 percent annually.

Source: Congressional Research Service.

For the purpose of estimating replacement rates and costs in both variations of Option 4, it is assumed that the rate at which employees will participate will average 50 percent full participation. Thus, the replacement rates displayed in table 12 are the return on the aggregate government contribution to the plan. Those who do not fully participate in the thrift plan will receive less replacement income from the government contributions.

In both variations of Option 4, employees could decide at retirement to take reduced initial annuities and have the annuities indexed for inflation, or they could choose higher annuities not indexed, relying on the indexing of social security to protect them against inflation. Table 13 illustrates this choice for Option 4–A.

TABLE 13.—COMPARISON OF GROSS FINAL YEAR PAY OVER TIME FOR INDEXED AND NONINDEXED VARIATIONS OF OPTION 4–A—HIRED OCT. 1, 1982, RETIRED AT AGE 65 WITH 40 YEARS OF SERVICE

[Includes social security benefit; 4-percent inflation]

	In percent			
	Low GS	Middle GS	High GS	Postal Service
Current system	72.3	72.3	72.3	72.3
Option 4–A (indexed—4 percent[1]	85.9	76.3	88.8	93.5
Option 4–A (nonindexed):[1]				
(a) at retirement	103.0	95.8	112.9	113.5
(b) at age 80	73.5	62.1	71.3	79.0

[1] Value of total Government contribution for employees who fully participate in the thrift plan, plus value of social security benefit.

Source: Congressional Research Service

As table 13 shows, employees who choose nonindexed annuities under Option 4-A would receive higher initial gross replacement rates than are received under the current system, with replacement rates exceeding 100 percent for most employees. Table 13 demonstrates that inflation (assumed here at 4 percent annual) will erode the value of this high benefit so that after 15 years, nearly all employees will have lower gross replacement than under the current, fully indexed CSRS, even though their social security benefits are fully indexed. Although employees selecting the indexed variation in Option 4-A receive somewhat higher annuities than under the current system, they do receive lower initial replacement rates than if they select nonindexed annuities. However, gross replacement rates for indexed annuities remain relatively constant relative to inflation. Of course, if inflation exceeds the 4 percent annual rate assumed for these comparisons, gross replacement rates would decline accordingly.

Thrift plans. None of the integrated options replicate current benefit levels for all grades at all retirement ages. Designing such an option and coordinating it with social security is impractical given the income redistributional aspects of that program. Employees who desire higher replacement rates than are provided by the basic plan are encouraged to participate in saving for retirement. A common employer-sponsored mechanism for encouraging employee savings is the thrift plan: a thrift plan is offered by employers as an incentive to encourage employees to save, usually to supplement pension benefits, but it could be used for other major expenses such as purchasing a home or major educational expenses.

A thrift plan is essentially a defined contribution plan but with matching rather than automatic employer contributions. Participation and level of contribution are voluntary on the part of the employee and are matched in whole or in part by the employer, usually up to a prescribed maximum. Over 40 percent of employees in the private sector have the opportunity to participate in a thrift or savings plan. At least two Federal agencies—the Tennessee Valley Authority (TVA) and the Federal Reserve Board—provide thrift plans to their employees.

A thrift plan is an integral feature of Option 4, the defined contribution plan integrated with social security. Benefit levels provided under the automatic features of Option 4-A are generally lower than benefits available under the current CSRS and under the other options discussed. (The exception is workers retiring at age 65 and 40 years of service.) The thrift plan is intended to encourage employees to plan and save for their retirement.

Under the thrift plan designed to accompany Option 4, employees would be permitted to contribute up to 6 percent of salary. In the Option 4-A thrift plan, contributions would be matched dollar for dollar. In the lower cost Option 4-B, contibutions would be matched at the rate of 50 cents for each dollar. That portion of the amount attributable to employer contributions would be subject to the 5-year vesting requirements.

Tables 11, 12, and 13 assumed that employees elected to participate in the thrift plan and showed, in addition to social security, the combined replacement rates that would be provided based solely on employer contributions. They do not show the value of the additional retirement benefits that could be purchased by an employee's own contributions to the thrift plan. On the other hand, employees who chose not to participate in the thrift plan or contributed less than 6 percent of their salaries would have lower replacement rates.

Column 1 of table 14 shows the gross replacement rates provided by the current system. Column 2 shows gross replacement rates provided by the defined contribution plan alone if the employee does not participate in the thrift plan. Column 3 shows the value of employer provided benefits (plus social security benefits) if the employee elects to participate in the thrift plan. Column 4 shows how these replacement rates would be increased by incorporating the employee's contributions to the thrift plan. Of course, if the employee contributed less than 6 percent of salary to the thrift plan the employer would match a lower amount. This would in turn produce lower replacement rates than shown in columns 3 and 4.

TABLE 14.—REPLACEMENT OF GROSS FINAL YEAR EARNINGS UNDER CONSTANT COST VARIATIONS TO OPTION 4-A (65-40 COMBINATION AT RETIREMENT)

[Indexed 4 percent annually]

	Current CSRS	Option wtih thrift plan—Benefits from automatic and thrift			No thrift plan but higher employer contributions to automatic benefits
		Value of benefits without participating in thrift	Value of benefits from employer contributions only	Full value of benefits including employee contributions	
Low GS	72.3	66.2	85.9	105.6	76.1
Middle GS	72.3	58.0	76.3	94.6	67.2
High GS	72.3	67.0	88.8	110.5	77.9
Postal Service	72.3	71.3	93.5	115.7	82.4

Note: Thrift plan assumes an average of 50 percent full participation.

Source: Congressional Research Service.

Table 14 shows that employees contributing 6 percent of their salaries to the thrift plan would have more income in retirement than they had while working. Those employees not participating would have only about two-thirds of their gross earnings replaced from the defined contribution plan alone as shown in column 2.

In developing the cost estimates, it was assumed that on average, there would be 50 percent full participation in the thrift plan with appropriate matching employer contributions. Thus, if employer contributions flowing to the automatic provisions were kept constant, and no thrift plan were offered (or fewer than half participated), then overall government costs for this option would be lower. However, if the option were designed to keep the government's cost the same but not to offer a thrift plan, more funds could be directed into the defined contribution plan. In other words, employer contributions that would have been made only to thrift plan participants could now be spread evenly among all workers. While this would reduce employer provided benefits flowing to thrift plan participants, it would increase the benefits payable to those employees who would not have chosen to participate. This redistribution of employer contributions is shown in column 5.

Finally, table 14 shows that the fundamental trade-off in Option 4-A is between employee discretion and higher replacement rates, and not between higher replacement rates and higher employer costs. In Option 4-A, if employees contribute to the thrift plan, they can receive higher benefits than they can receive if no thrift plan is offered. In either case, the cost to the government is identical, given the assumption that 50 percent of the employees would fully participate in the thrift plan.

The thrift plan option is likely to be utilized most frequently by employees making more than the social security wage base, currently $32,400. Because Option 4 is noncontributory, employees would no longer contribute the 7 percent of salary they now contribute to CSRS. All employees must pay social security taxes of 6.7 percent (in 1982) on their income below the taxable wage base. Employees making more than the taxable wage base would not have to make this contribution and would, therefore, experience an increase in disposable income of 7.0 percent of their salary above the social security wage base. For example, for an employee at the current pay maximum of $58,500, this increase in disposable income would total $1,827. Under Option 4, employees would be able to save this increased disposable income for retirement.

A thrift plan could be designed to accompany any of these options. Any of the options could be redesigned with lower direct costs or different replication targets if a thrift plan were included. The fundamental design trade-off a thrift plan provides is in the area of employee responsibility for retirement planning. Within the same overall plan cost, money can be directed at the automatic features of the benefit formula or at the plan features that reward employees willing to save toward their retirement.

VESTING

One possible liberalization to the current CSRS is in vesting. Under the current system, providing a vested right to any part of the Federal Government contribution to CSRS, other than granting a deferred benefit, would be costly. If any of these options were adopted, part of the savings could be redirected to employees who terminate before retirement.

Options 2, 3, and both variations of Option 4 provide improved vesting rights. These options would improve vesting by granting employees the present value of future benefits whether or not they left Federal service; these benefits would be financed exclusively by government contribution and thus, could not be forfeited by employees withdrawing their own contributions as under the current plan. Option 4 explicitly provides employees the right to withdraw these government contributions at separation. Although Options 2 and 3 do not provide for withdrawal rights, primarily, this was assumed for demonstration purposes so that short-term budget costs under the two options could be more accurately predicted. Long-term costs would be the same whether or not employees were able to withdraw the present value of future benefits at the time of separation. If withdrawal were to be permitted, the only actual difference in cost would be at the point in time at which the cost was paid. There would be no difference in real, that is, discounted dollar amounts.

In developing options for restructuring, the vesting issue was of paramount importance. Changing CSRS vesting rights to more closely resemble Employee Retirement Income Security Act of 1974 (ERISA) standards either involves additional costs or redistributes government expenditures away from retirees and toward employees who leave service before retirement. By providing some pension value to the large number of separating employees who currently receive little if any value from CSRS, these options shift some of the Federal retirement dollar to workers with shorter periods of service.

The current CSRS, with its restricted vesting rules, is an inducement for employees with substantial Federal service to remain in their careers until retirement. Breaking the so-called "golden handcuffs" would be a significant departure for CSRS. Redirecting pension values from longer service workers to workers who do not work full careers in government diminishes the inducement for employees with substantial years of service to remain until retirement. Thus, reducing benefits for early retirement, while increasing vesting rights for employees who terminate before retirement is likely to increase turnover rates in all general service grades.

The decision to leave Federal service and accept employment outside government becomes more nearly neutral if employees are given vested rights to accrued benefits. These vesting options eliminate the "all or nothing" choice facing the current employee contemplating leaving Federal service. If, as in Option 4, vested employees are able to leave Federal employment and reinvest accrued pension rights, employees who might otherwise remain in Federal employment strictly because of anticipated retirement benefits may be encouraged to leave for employment outside the government. In addition, under these options, the employee would retain social security credit and insurance protection.

Table 15 displays vested rights held by an employee entering Federal employment at age 25 and leaving with different lengths of service. Full vesting is assumed after 5 years.

TABLE 15.—VESTING RIGHTS FOR ALL OPTIONS: VALUE OF VESTED BENEFIT AT TERMINATION FOR MIDDLE-LEVEL EMPLOYEE ENTERING AT AGE 25

	Age at termination			
	30	35	40	45
Government contributions with interest:				
Option 4-A	$16,000	$46,000	$89,000	$147,000
Option 4-B	11,000	32,000	63,000	106,000
Deferred vested benefit Government portion:				
Current:				
Employee	6,000	15,000	25,000	36,000
Employer	5,000	21,000	58,000	135,000
Total	11,000	36,000	83,000	171,000
Option 2	6,000	19,000	42,000	89,000
Option 3	6,000	20,000	44,000	98,000

Note: The table shows the value at termination of the Government's contribution or Government share of the cost of deferred benefits. This is in addition to any benefits earned by the employee's contributions and the social security benefit. Under the current system, the departing employee can lose the deferred value by withdrawing his contribution.

Source: Hay Associates

REVISING THE DISABILITY AND SICK LEAVE PROGRAM

Critics of the present disability and sick leave structure point to five problems: (1) Some employees abuse sick leave, treating it as personal or annual leave; (2) the performance-based or "occupational" definition of disability allows payments to some individuals capable of working at some other occupation; (3) some employees may have gaps in income protection during convalescence; specifically, employees who exhaust accrued and advanced sick leave before recovering from an illness or injury may be forced to choose between receiving no income until they recover or applying for permanent disability with indefinite job rights after recovering; (4) disability benefit payments are much lower than social security for short-term or low-paid disabled employees or those with families; and (5) the present structure grants no portable disability insurance to employees who leave their Federal positions.

This report does not provide any estimates for costs or savings if the disability program were modified outside of the context of social security coverage of Federal employees. Nevertheless, certain changes could be made which would reduce expenditures of the present system. For instance, the definition of an economically recovered disability annuitant could be modified, and the procedures for verifying the income of disability annuitants strengthened. According to the General Accounting Office (GAO), the present practice of permitting employees to exhaust sick leave prior to applying for disability should be discontinued. GAO also believes that employees unable to continue working in their current positions but able to perform in some government job should be required to accept reassignment at their current salary rather than being given a life-time benefit. Finally, if Federal employees became covered by the Medicare tax and benefit provisions of the Social Security Act as has been proposed, precedent would be established for covering Federal employees with the disability provisions of the same act.

If, as in Options 2, 3, and 4, CSRS were completely restructured and Federal employees covered by social security, then it would be necessary to revise the CSRS disability program to accommodate the income protection of the social security disability program. The following plan could be used in conjunction with all social security options. There are, of course, numerous other options for modifying CSRS disability in conjunction with social security. This particular disability and sick leave configuration was selected for discussion because it is similar to prevailing private plan practices and because it addresses all five problems discussed earlier.

Currently, Federal employees earn sick leave at the rate of four compensable hours per pay period, or 13 days sick leave per year. No disability protection is provided until an employee has completed five full years of service.

This suggested disability program distinguishes between temporary and permanent, and between partial and total disability. Sick leave and short-term disability protection would be provided immediately. Employees would be eligible to apply for (or be placed on) long-term disability after a disabling sickness or injury has lasted 6 months.

SHORT-TERM DISABILITY

Under the disability plans prepared to accompany Options 2, 3, and 4, an employee would be eligible immediately for 26 weeks of compensation. This short-term disability/sick leave feature is intended to replace different percentages of salary depending upon length of service. Maximum replacement would be acquired in five years. Short-term disability/sick leave would not accumulate. Employees would be expected to document the need for sick leave, and frequent use could provoke a fitness-for-duty exam and in some cases, the employee might be subject to adverse action.

Table 16 displays sick leave and short-term disability provided under Options 2, 3, and 4. Cost estimates for these options included this disability and sick leave benefit configuration.

TABLE 16.—SICK LEAVE AND SHORT-TERM DISABILITY COVERAGE

Years of service	Number of weeks and percent of salary replaced		
	100 percent	80 percent	60 percent
1	1	5	20
2	2	6	18
3	3	7	16
4	4	8	14
5+	5	9	12

LONG-TERM DISABILITY

The current system defines disability as "totally disabled for useful and efficient service in the grade or class of position last occupied." In contrast, to be eligible for social security disability benefits, the worker must be incapable of performing any job (regardless of whether such a job is available or would be offered anywhere in the national economy) because of a physical or mental condition that is expected to last at least 12 months or to end in death. This definition is appropriate for an income insurance program covering all or nearly all employment in the economy, and is not intended as a standard of disability with respect to any particular job or type of employment. Then, too, social security disability eligibility requirements involve different length-of-service criteria, and an employee may not be eligible for social security disability protection until after having completed up to 5 years of covered employment. Thus, some employees will be disabled for purposes of government employment but will not be eligible for social security disability. In these cases, if the disability beneficiary could not resume his government job, this option would continue payments at the 60 percent level for 24 months after commencement of benefits (see table 17 below). After 24 months, benefits would continue only if the beneficiary was unable to hold any job. This redetermination of disability would be based on criteria similar to those administered by social security.

Table 17 displays the long-term disability provisions to accompany Options 2, 3, and 4, and to supplement social security disability income.

TABLE 17.—LONG-TERM DISABILITY PROVISIONS

Definition (to 24 months)	Inability to perform duties of grade or class of position.
Definition (after 24 months)	Inability to perform any gainful employment.
Eligibility	Immediate.
Qualifying period	Illness (or injury) lasting 6 months or more.
Replacement	60 percent of salary.
Effect on CSRS benefit of social security benefit.	Plan benefit offset 100 percent by any social security benefits (frozen at award).
Duration of payment	To age 65, transferred to retirement rolls when eligible at age 65.
Cost-of-living adjustments	Social security 100 percent of CPI changes annually. No adjustment for plan disability payments.

The current CSRS disability program replaces approximately 38 percent of salary for employees with less than 22 years of service, regardless of salary level. The particular disability option chosen for discussion has a target replacement rate of 60 percent of an employee's predisability salary. A target replacement rate of 60 percent was chosen because that amount is a common target in private pension plans. The program benefit would be offset dollar for dollar by any social security benefit, including any family benefit. As a result of this offset, employees with families, and employees with relatively lower incomes would receive a larger portion of their disability benefit from social security; higher income employees would receive greater CSRS disability payments. Because of the income redistributional aspects of the social security program, employees with lower incomes or larger families may actually receive social security benefits in amounts greater than 60 percent of salary. These beneficiaries would receive a minimum monthly benefit of $50 from CSRS.

Disability payments from social security are fully adjusted for changes in the cost of living. These increases would not be offset against any disability benefits received from CSRS. CSRS supplementary disability benefits would not be indexed. After the disabled worker was transferred to the retirement rolls, cost-of-living adjustments would be provided on the same basis as for other retirees.

CHANGING CSRS: ANALYSIS OF COSTS

The cost analysis presents individual and aggregate economic data on one standard set of economic assumptions. The cost estimates were developed by Hay Associates and by the Office of the Actuary, Social Security Administration (SSA); some data were provided by the Office of Personnel Management (OPM).

The OPM data consisted of demographic information on the age, service and sex characteristics of recent hires and current employees under the CSRS as of October 1, 1980. OPM also provided projections of certain modifications to CSRS under OPM's current economic assumptions as well as the assumptions specified for this report. These data were validated and entered into the Pension Valuation Language (PVL) system of Hay Associates to determine the expected cost and/or savings to be generated by the various options, now and in the future.

Cost analysis included short- and long-term projections and the actuarial normal cost. The normal cost is the present value of future benefits divided by the present value of future compensation, for a typical group of new entrants. In other words, the normal cost is the percentage of pay that should be contributed, over the Federal career of a group of new entrants, to fully pay for the benefits to be earned by that group.

SSA provided projections of the effect on the social security trust funds of the various options. The net revenue and benefit experience of the CSRS and social security programs were combined to give a total budget presentation.

DEMOGRAPHIC ASSUMPTIONS

Demographic assumptions used for CSRS were those currently used by the Board of Actuaries of CSRS as shown in the Board's latest report. These demographic rates reflect the experience of civil service employees and annuitants in the late 1970s and are, therefore, the most appropriate available for this study.

SSA made similar projections using the current social security set of demographic assumptions developed for the 1981 Report of the Social Security Board of Trustees. CSRS and SSA demographic assumptions are reasonably consistent for the purposes of this study.

Modifications of CSRS demographic assumptions were made where necessary. For instance, if the retirement age is increased to 65, with benefit reductions below age 65, the rate of retirement from 55 to 65 will be lower. The retirement rates were selected to be consistent with past experience in CSRS which shows that even a moderate reduction in benefits for early retirement will substantially reduce retirement rates. It was assumed for Options 1 and 2 that the probability of retirement before the full retirement age would be one-half current rates. This is consistent with the increase in rates that occurred when a minimum reduction for early retirement was removed in 1966. For Option 3, even lower rates of retirement were selected since the reductions for early retirement were much sharper. Hay Associates used similar data from other retirement systems to evolve a set of rates.

Modified rates were also necessary for the revised disability program under Options 2, 3, and 4. A study of the relative incidence of disability showed that male disability rates under social security are approximately 60 percent of the rates of those under CSRS and the disability rates for females are approximately 40 percent of CSRS. This difference between the two programs is primarily attributable to the relatively stringent definition under social security. Accordingly, the 60 percent and 40 percent factors were used in the valuation of that part of the revised program. It was assumed that those not found disabled by social security would continue in CSRS payment status for 1 year after denial of social security benefits and then leave the rolls.

Finally, the involuntary rates were cut in half for options which required reductions below age 60. It is unlikely that true involuntary retirements will be substantially reduced as a result of a plan change. However, the number voluntarily retiring at earlier ages when an agency is undergoing a Reduction In Force (RIF), can be expected to be much less than currently if the benefits are substantially reduced.

ECONOMIC ASSUMPTIONS

A standard set of economic assumptions was used for all analysis so results for SSA and CSRS could be combined. Slight differences in economic assumptions can make a substantial difference in estimated retirement costs since the benefits are paid over a very long period. Economic assumptions used in these estimates are among those used by social security actuaries to estimate both short-term and long-term costs of social security. The specific set of assumptions chosen for use in all estimates in this report is known as Intermediate II-B, developed for the 1981 Report of the Social Security Board of Trustees.

Social Security Intermediate II-B was chosen because it can be viewed as a fairly moderate forecasting tool. After 1990, these rates are reasonably consistent with the rates used by the CSRS Board of Actuaries, but the "real" rates of interest and salary growth are somewhat higher (see table 19). The real rate of interest or wages is the difference between each of those assumptions and the assumed rate of price increases. The set of assumptions contained in II-B was applied to the CSRS demographic package; the alternative of using CSRS Board of Actuaries economic assumptions to estimate budget effects on social security of the various options was impractical.

Table 18 displays the short-term economic assumptions contained in Social Security Intermediate II-B.

TABLE 18.—SHORT-TERM ECONOMIC ASSUMPTIONS: SOCIAL SECURITY INTERMEDIATE II–B

[Expressed as annual percent increase]

	Interest	Wage growth	Inflation
Year:			
1982	9.9	9.6	9.4
1983	9.1	9.7	9.0
1984	8.4	8.8	8.2
1985	7.9	8.1	7.4
1986	7.4	7.3	6.6
1987	7.1	6.8	5.8
1988	6.7	6.2	5.0
1989	6.4	5.5	4.2
1990	6.1	5.4	4.0

Source: 1981 Report of the Social Security Board of Trustees.

Table 19 displays the long-term economic assumptions used in estimating all normal costs. It will be noted that economic assumptions used in Social Security II-B produce somewhat different estimates of the normal cost of the current CSRS. Assumed rates of "real interest growth," i.e., the difference between interest and inflation, account for the difference in normal cost for the current CSRS as estimated by the two sets of assumptions.

TABLE 19.—EFFECT OF DIFFERENT ECONOMIC ASSUMPTIONS ON CURRENT CSRS NORMAL COSTS

[Expressed as long-term annual percent increase]

	Interest	Wage growth	Inflation	Normal cost
CSRS Board of Actuaries	6.0	5.5	5	36.46
Social security intermediate II-B	6.1	5.5	4	31.23

While the absolute cost figures are substantially different using the two sets of assumptions, the focus of this study is relative differences, not absolute levels of cost. Because of the sensitivity of CSRS and the social security system costs to the set of economic assumptions, valuations of the same set of benefits on different assumptions will be substantially different. However, valuations of different benefits on either set of assumptions will show the same *relative* difference.

Analysis shows that each of the three economic assumptions has substantial effects on estimates if it is changed. For instance, costs will decrease by 11 percent for each percent of reduction in the inflation assumption. This means, among other things, that a fully indexed system will cost 50 percent more than a nonindexed system if there is a 4 percent inflation rate. Thus, using the OPM assumptions, the cost of the current CSRS system, if it were not indexed, would be about 24 percent of payroll instead of 36 percent.

EFFECT ON THE FEDERAL BUDGET OF CHANGES TO CSRS AND SOCIAL SECURITY

Although the Federal Government has obligations as an employer, its retirement expenses are important not only as employer compensation costs, but as costs that must be accounted for by the Federal Government in its larger role as manager of the national budget. Because the Federal Government holds the trust funds, CSRS as well as social security, the effect of either of these trust funds on the budget deficit or surplus is exclusive of the operations of the trust funds considered as independent accounts. The budgetary cost to the government, and therefore, the taxpayer, occurs when payments are made to beneficiaries. Employee contributions, on the other hand, can be considered income to the government. Thus, the equation for budgetary impact is employee contributions received less annuity payments made, under either CSRS or social security.

In Option 1, all three variations reduce costs to the present system, but leave the basic structure intact. Savings are achieved by delaying retirement, by reducing benefits for people who retire early, generally reducing benefits people receive when they do retire, and adjusting benefits by a smaller inflation factor after retirement. These three variations have been priced separately and are not additive without further analysis given the interactive effects of one change with another. For instance, changing the retirement age immediately (1-B), affects the number of people on the rolls, and thus the number of benefits requiring adjustments, while changing COLA (1-A) may have the effect of discouraging retirement, thereby reducing the number on the rolls.

Options 2, 3, and 4 substantially lower costs over the long run, but they show only a slight net savings in the early years. This is because the employee contributions are about the same under the combined CSRS/social security system, whereas benefits are not affected until the people actually begin to retire—largely in the next century. These options assume that only employees hired after the effective date would enter a restructured CSRS. The long range cost savings of options affecting new employees only would not be substantially higher than the long range cost savings if the options affected current employees. The latter, on the other hand, would show substantial earlier savings.

Table 20 shows the 5-year net budget effect of all the options under discussion.

TABLE 20.—COST EFFECTS OF ALL OPTIONS: REDUCTION IN 5-YR. NET BUDGET OUTLAYS IF EFFECTIVE OCT. 1, 1982

[In millions of dollars; dollars in parentheses represent net cost]

	Fiscal year—					Total
	1983	1984	1985	1986	1987	
Option 1-A	300	960	1,590	2,310	2,820	7,980
Option 1-B	90	250	450	650	880	2,320
Option 1-C	20	70	120	180	250	640
Option 2	(20)	50	100	180	250	560
Option 3	(20)	50	100	180	250	560
Option 4-A	30	160	230	310	370	1,100
Option 4-B	30	190	290	420	530	1,460

Source: Hay Associates

The large majority of employees covered by CSRS are employed by agencies of the government and, therefore, the benefits and contributions of CSRS directly affect the unified budget. There are some agencies, notably the Postal Service, with financial operations outside of the unified budget. Therefore, it could be argued that the contributions of the Postal Service, and other outside agencies, to the trust funds should be treated as additional income to the government. However, in the larger sense, it is unlikely that the current level of contributions or any reduction in contributions by the Postal Service, or similar agencies, would directly affect outlays. More likely, these would affect the amount of direct or indirect subsidy from the government to the large off-budget agencies. Therefore, it is appropriate for the study to treat the entire budgetary impact under the general equation of employee contributions minus outlays and ignore any transfers from agencies to the trust funds whether the agencies are inside the unified budget or not.

Table 21 shows the long-term change in outlays that can be expected as employees hired after the effective date reach retirement age and as the ratio of retirees under each system begins to change. Option 1-A, which immediately reduces COLA and gradually penalizes early retirement, saves between 5.6 percent and 5.9 percent of payroll annually over the entire period, or over $3.0 billion in current dollars each year. Note that Options 2 and 3, after only slight changes in costs initially (see table 20), begin to reflect substantial savings in the second decade of the 21st Century as young employees entering in 1983 reach retirement. By the year 2050, nearly all beneficiaries would be receiving benefits under any new system. Cost differences by the end of the transition period are a reflection of different long-run assumptions, applied to the structural variations.

TABLE 21.—NET SAVINGS IN LONG-TERM NET OUTLAYS FOR CSRS

[Effective Oct. 1, 1982, percent of payroll]

	Fiscal year—		
	2000	2025	2050
Option 1-A	5.6	5.9	5.8
Option 1-B	1.2	1.5	1.6
Option 1-C	1.5	1.7	1.9
Option 2	2.9	6.5	5.0
Option 3	2.9	7.0	4.1
Option 4-A	1.0	6.5	4.2
Option 4-B	2.1	10.5	8.9

Source: Hay Associates.

LONG-TERM COSTS OF CSRS

Table 22 displays the direct impact on employer cost of moving to one of the options, including additional social security costs and offsetting Federal Employee Health Benefits (FEHB) costs, if applicable. The table combines the employer normal cost, which is the long-term level cost of the option expressed as a percent of payroll, with the long-term social security contribution.

This table shows what the Federal Government would have to pay for the current and revised options, for new employees, if the government were a private sector employer. Because the Federal trust funds, for both social security and CSRS, are part of the unified budget, this table does not show the actual budget impact. However, it is important that the long range cost of the options be shown in relation to a comparable set of figures so that the costs of various options can be judged.

Table 22 was constructed using the Social Security Board of Trustees' alternative assumptions II-B. Column 1 shows that under the II-B assumptions, CSRS is assessed at 31.23 percent of payroll, but that under the assumption used by the CSRS Board of Actuaries, it is assessed at 36.46 percent. This difference is strictly a result of different economic assumptions, and not any differences in basic data sets.

TABLE 22.—LONG-TERM LEVEL COSTS OF ALL OPTIONS

[Percent of payroll]

	Level cost of employer plan (+)	Employee contribution (−)	Employer social security contribution (+)	Health plan savings (−)	Net cost
Current plan using CSRS Board of Actuaries assumptions	36.46	7.00			29.46

TABLE 22.—LONG-TERM LEVEL COSTS OF ALL OPTIONS—Continued

[Percent of payroll]

	Level cost of employer plan (+)	Employee contribution (−)	Employer social security contribution (+)	Health plan savings (−)	Net cost
Social security II-B assumptions:					
Current plan	31.23	7.00			24.23
Option 1-A	26.17	7.00			19.17
Option 1-B	29.88	7.00			22.88
Option 1-C	29.67	7.00			22.67
Option 2	14.77		7.65	0.40	22.02
Option 3	14.78		7.65	.40	22.03
Option 4-A	17.50	[1] 3.00	7.65	.40	21.75
Option 4-B	14.00	[1] 3.00	7.65	.40	18.25

[1] Average.

Note: Options 2, 3, and 4-A and 4-B include cost of separate disability. Options 4-A and 4-B include net cost to Government of voluntary thrift plans, assuming 50 percent full participation.

Source: Hay Associates.

For the purpose of comparing costs to the Federal Government as an employer with retirement plan obligations, the normal cost of social security is equal to the social security tax, currently scheduled to reach 7.65 percentage of payroll in 1990 and remain at that level. Treating the social security tax as an item of level cost is consistent with the concept of social security as a program financed by a workforce-wide transfer between generations—the level cost of social security benefits is, to an employer, equal to the tax paid and is thus priced only for scheduled tax increases. Critics of the social security financing mechanism suggest that its pay-as-you-go strategy will ultimately demand an unmanageable level of taxation. Defenders of the arrangement argue that the mechanism will always merely quantify the level of production flowing from workers to beneficiaries, a level, defenders argue, that can only be established politically, regardless of the accounting system used to measure it. Thus, whenever the future cost of social security coverage to employers is estimated, it is appropriate to assume only those rates and increases that are legally scheduled.

Options 2 and 3 do not require employee contributions to CSRS although employees would contribute to social security. Options 4-A and B do provide for employee contributions to a voluntary thrift plan. The thrift plan participation rate is assumed to be 50 percent, that is, an average 50 percent of the aggregate maximum possible contribution will be made. The difference in the rate at which the government matches employee money has some effect on net level cost. The lower rate of matching contributions, i.e., 50 percent matching up to 6 percent of salary in Option 4-B as compared to 100 percent in 4-A, accounts for part of the difference in level cost between the two variations in Option 4. The other difference is in amounts the government contributes to the basic plan. In Option 4-A, the government contributes 9 percent of salary up to $20,000, and 16 percent for each salary dollar over $20,000 to the basic plan while in lower cost variation 4-B, the rates are 7 percent to $20,000 and 14 percent over $20,000.

IMPACT OF OPTIONS ON SOCIAL SECURITY

Covering Federal employees by social security will have little short-term effect upon the unified Federal budget. It has been argued that in the short run, Federal outlays would rise, if Federal employees were covered by social security. This is simply not the case. As stated previously, Federal outlays for both social security and civil service retirement benefits reflect rights earned some years prior to the commencement of payment. These rights would continue to be honored; consequently outlays for benefits would continue as before. While the Federal Government would now be a contributor to the social security system, in addition to paying the continuing costs of the existing CSRS, this transaction would be internal, that is, it would be an intragovernmental transfer of funds resulting in no new revenues of expenditures to the Federal Government. Similarly, the employee would now make his contributions to the social security trust funds rather than the civil service trust fund.

In the long run, the retirement obligations of the Federal Government as an employer would be reduced if social security coverage were provided Federal employees. As a greater portion of the cost of Federal employee retirement and disability benefits were borne by the social security program, these reduced costs would occur as duplication in benefits began to diminish and be eliminated.

However, it is also important to look at the implications for the social security trust funds of covering Federal workers by social security. There are basically three possible methods of improving the financing of the social security trust funds: payroll tax increases, benefit reductions, or new sources of revenue. An expansion of coverage to include noncovered State and local employees would be a new source of Federal revenue. Coverage of Federal workers, however, is not the same sort of revenue infusion: employee contributions currently going to the Civil Service Retirement Fund would be redirected to social security; the employer's share of the social security tax would likewise come from within the Federal budget. While these are new revenue sources for social security they do not constitute additional revenues to the unified Federal budget.

If mandatory social security coverage of Federal employees were motivated in part by the desire to improve the financing of the social security system, then it could diminish any perception that other means are needed to strengthen the social security system which would increase Federal revenue (e.g., through a payroll tax increase) or reduce Federal expenditures (e.g., through benefit deliberalizations). These alternatives would affect the Federal deficit (or surplus, if it existed). Although different in form, because the net budget effect is so small, coverage of Federal employment has the same implications for short-term Federal fiscal policy as any other direct general fund payment to social security—it does not bring additional revenues into the Federal Government, nor does it cause additional expenditures, and it therefore does not affect a Federal budget deficit.

Options 2, 3, and both variations of Option 4 extend social security coverage to Federal employees after the effective date. Thus, the social security program would receive contributions it is not now receiving and it would be acquiring benefit obligations it does not now have. The impact of this additional revenue to the social security trust fund is substantial. Table 21 displays the short-term effects on the social security trust funds if coverage is extended to Federal employees hired after the effective date. For comparison purposes, table 23 also shows trust fund impact if all new Federal employees and current employees under age 45 with less than 20 years of service are covered.

TABLE 23.—ESTIMATED ADDITIONAL OASDHI TAX INCOME AND OASDHI BENEFIT PAYMENTS FROM EXTENDING COVERAGE TO FEDERAL EMPLOYEES

[In billions of dollars; effective Jan. 1, 1983]

	Proposal A[1]		Proposal B[2]	
	Additional tax income	Additional benefit payments	Additional tax income	Additional benefit payments
Fiscal year:				
1983	$0.3	(3)	$3.0	(3)
1984	1.0	(3)	4.7	(3)
1985	1.8	(3)	5.9	(3)
1986	2.7	(3)	7.1	(3)
1987	3.6	(3)	8.2	(3)
1988	4.7	(3)	9.5	$0.1
1989	5.8	(3)	10.8	.1
1990	7.5	(3)	12.8	.2

[1] Proposal A: Federal employees hired after effective date.
[2] Proposal B: Federal employees hired after effective date and current employees under age 45 with less than 20 yr of service.
[3] Less than $50,000,000.

Source: Social Security Administration, Office of the Actuary, Nov. 19, 1981.

Table 23 illustrates that in the short-run, social security coverage of Federal employees would improve the financial condition of the social security system. The near-term additional revenues would exceed the near-term additional expenditures. Under the Intermediate II-B assumptions in the 1981 Social Security Trustees' Report, the combined OASI, DI, and HI trust funds could run into cash-flow problems in early 1985. At the beginning of 1985, the combined assets of the three trust funds would be $33.6 billion, which would be equivalent to about 12 percent of that year's expenditures. The social security actuaries believe that it is possible that benefit payments cannot be made on time whenever reserves reach such a low level. These same assumptions project that the combined assets would be completely exhausted in 1989. If social security coverage were extended to new Federal employees (Proposal A), the combined assets of the trust funds at the beginning of 1985 would be increased by $1.5 to $2 billion—thereby possible postponing the point at which benefit payments are jeopardized. The combined assets of the trust funds at the end of 1989 would be about $17 billion, instead of being completely exhausted. Proposal B would make an even greater improvement in the short-run condition of the system.

Over the long term, improvement in the financial operation of the social security programs would result because the income would exceed the cost of bringing new participants into the social security system. The social security actuaries estimate that there would be an average long-term (75 years) advantage to covering all Federal employees by social security. This savings to the social security program would be equivalent to roughly .28 percent of taxable payroll, thereby eliminating one-sixth of the system's long-term deficit.

Table 24 displays the long-term savings to social security of covering Federal employees by the program.

TABLE 24.—ESTIMATED LONG-TERM SAVINGS AS A RESULT OF COVERING FEDERAL EMPLOYEES BY SOCIAL SECURITY

[Percent of payroll]

	Federal employees—	
	Hired after the effective date	Under age 45 with less than 20 yrs service
Fiscal year:		
1991	0.22	0.35
1992	.24	.36
1995	.29	.40
2000	.32	.41
2005	.35	.39
2010	.36	.38
2015	.40	.36
2020	.43	.34
2025	.42	.36
2050	.16	.14
Average over 75 yr	.28	.28

Source: Social Security Administration, Office of the Actuary.

APPENDIXES

APPENDIX A: ANALYSIS OF EARNINGS REPLACEMENT RATES

There are several points in time when earnings replacement rates, the ratio of retirement benefits to preretirement earnings, may be examined. It is important to look at replacement rates not only at the time of retirement, but during the postretirement period when the replacement rates are affected by inflation, changes in individual income tax liability, and social security. The *net* earnings replacement rates shown in this section were derived by dividing "after tax" retirement income by final year's earnings after taxes and employee contributions to the Civil Service Retirement System (CSRS) were subtracted. The methodology of the earnings replacement analysis is discussed in detail in Appendix B.

Retirement of Federal employees before age 62 when social security benefits commence complicates the comparison of the present CSRS system with the replacement rates under the options which "integrate" a new Federal pension with social security. For instance, a worker retiring with 30 years of service at age 55 will have one initial replacement rate at the time of retirement. Net replacement rates will decline substantially under the current system when the civil service benefit changes from a "tax-free" benefit to a fully taxable benefit (i.e., when the retiree recoups in retirement benefits the full amount contributed to the plan). This change does not occur under any of the integrated options selected (unless the employee participates in the thrift plan) since the social security benefit will always be nontaxable while the pension benefit will be fully taxable.

Both gross and net replacement rates change still again at age 62 when social security benefits begin under all integrated options and when the social security offset is first applied under Option 2. Moreover, each year thereafter there will be a reduction in replacement rates under Options 1-A, 2, and 3 because of inflation. A further change in tax liability occurs under the current system and all options at age 65 when individuals would be entitled to an additional income tax exemption on account of age. Lastly, a change in replacement rates occurs during the extended postretirement period since not all benefit options are fully indexed with price inflation. These key points in time may be summarized as follows:

Age:	What happens—
55	Initial annuity starting date. CSRS benefit not taxable.
58	CSRS benefit fully taxable.
62	Social security benefits commence. Offset applied under Option 2.
65	Additional personal exemption on account of age.
80	Benefits subjected to long periods of inflation.

To fully understand the implications of the various options, it is necessary to consider different combinations of age and years of service. However, to keep the presentation of the analyses manageable, three combinations of age and service will be shown—55/30, 65/40, and 65/10.

AGE-SERVICE COMBINATIONS SELECTED

The most common optional retirement under CSRS occurs at age 55 for workers with 30 years of service. In fact, one-third of employees who become eligible with 30 years of service at age 55 retire within 1 year. This combination of age and service serves as a benchmark for comparing replacement rates under the present system with any one of the options. A 65/10 combination was selected to look at short-service workers and a 65/40 combination for full-career employees.

Since the early retirement reduction under both Options 1-A and 1-B would have already been phased in by the time the workers in our analysis retired, the gross replacement rates under these options would be the same at the time of retirement. In the years after retirement, changes in gross replacement rates would take place under Option 1-A where benefits are only indexed by 70 percent of the Consumer Price Index (CPI). The only effect under Option 1-C would be an initially lower gross replacement rate (about 5 percent lower under the assumptions used in our analysis) because the pension benefit is based on an average of the 5 highest rather than the current 3 highest consecutive years' salary. Therefore, the only replacement rates presented in this section are for Option 1-A.

It should be noted that the earnings replacement rates shown under Options 4-A and 4-B are for pensions indexed to an assumed inflation rate of 4 percent a year. Under this assumption, a worker would convert the thrift and pension money to an annuity designed to increase at 4 percent a year. Thus, the benefit does not lose value after retirement unless actual inflation exceeds the assumed rate. If a nonindexed annuity were purchased, the initial benefit would be substantially higher than the amount which can be purchased on an indexed basis, but it would lose value rapidly after retirement.

BENCHMARK COMPARISON: 55/30

Since the CSRS benefit formula is uniform and workers are not covered by social security, gross earnings replacement rates should be the same for all workers with 30 years of service retiring at age 55. However, the gross replacement rate for the mid-GS level worker is slightly lower than for the other workers because he received a step increase pay raise in his final year of employment. Since the CSRS benefit formula is based on the High-3 average salary, the replacement rate will be somewhat lower than for other workers with the same amount of service.

The big difference, however, lies with net earnings replacement rates. While the low GS worker will have about 74 percent of his net preretirement income replaced under the present system, the high GS worker has 92 percent of his "take home pay" replaced.

This is because the higher GS worker's preretirement earnings were taxed at a higher marginal rate whereas the retirement benefits received are not initially subject to income tax. This is shown in the following table together with the gross and (net) replacement rates under the other options.

TABLE A-1.—GROSS AND (NET) REPLACEMENT RATES AT TIME OF RETIREMENT FOR 55/30 COMBINATION

GS level	Options					
	Current system	1-A	2	3	4-A	4-B
Low	53.4	45.4	42.7	25.9	24.7	16.4
	(73.9)	(62.8)	(51.6)	(33.1)	(31.7)	(22.3)
Middle	52.5	44.6	42.0	31.0	27.0	19.6
	(89.8)	(76.3)	(57.2)	(43.9)	(38.7)	(28.8)
High	53.4	45.4	42.7	31.7	35.9	26.5
	(92.3)	(78.5)	(58.2)	(45.0)	(50.0)	(38.3)
Postal	53.4	45.4	42.7	25.0	29.9	20.3
	(76.0)	(64.6)	(52.3)	(32.4)	(38.0)	(26.9)

Source: Congressional Research Service. See appendix B for a description of the wage histories constituting low, middle, high, and postal GS levels.

When comparing gross replacement rates between the current system and the various options, it is apparent that none of the options produce replacement rates *at age 55* as favorable as the current system. This is particularly true of Option 3 and the defined contribution plans (Options 4-A and 4-B). However, this is somewhat misleading since social security benefits do not begin until age 62. As will be demonstrated later, some civil servants would fare better in many instances under the other options depending on their salary level, when they retire, and how much service they have.

While replacement rates are uniform under the present system and Option 1-A because there are no social security benefits, the rates are about 8 percentage points lower (about 15 percent) under Option 1-A because of the penalty built into this option for early retirement. Even though the pension benefit formulas under both Options 2 and 3 are integrated with benefits provided under social security, the replacement rates are much lower under Option 3. This is because the benefit is offset by a percentage of social security at retirement (Option 2 is not offset until age 62) and because the "net" benefit is also reduced by 3 percent for each year under 65 (3 percent times 10 years, or 30 percent).

Even though a postal worker's final earnings are substantially below those of a mid-GS worker, table A-1 shows that the replacement rates are slightly higher under the defined contribution options. This is because postal workers' salaries rise very quickly during their early working years before leveling off. Relatively larger dollar contributions would be accumulated during the early years, and these contributions would have a longer time to grow with interest.

Changes in Tax Treatment of CSRS Benefit

A major change in net replacement rates occurs under the current system when the civil service benefit becomes taxable. Since civil servants do not receive tax deductions for mandatory pension contributions made during their working years, they are not taxed on their retirement benefits until they receive their contributions back in the form of benefits. The average length of time for this to occur is about 16 months. The following table shows the effect on net earnings replacement rates caused by the shift from a nontaxable benefit at age 55 to a fully taxable benefit at age 58. The change would be even greater for full career workers retiring with larger pensions at age 65.

TABLE A-2. CHANGE IN NET REPLACEMENT RATES WHEN CSRS BENEFITS BECOME TAXABLE FOR 55/30 COMBINATION

	Low GS	Middle GS	High GS	Postal Service
Current system:				
At retirement	73.9	89.8	92.3	76.0
At age 58	65.2	69.5	70.5	65.8
Option 1-A:				
At retirement	62.8	76.3	78.5	64.6
At age 58	54.8	58.9	59.9	55.2

Source: Congressional Research Service.

The biggest drop in net earnings replacement occurs for the high GS worker. Even though benefits under the current system are fully indexed, the net replacement rate falls from 92.3 percent to 70.5 percent because of the change in tax treatment of the retirement benefit—a drop of 21.8 percentage points (about 24 percent). The drop is not as great for the low GS worker (12 percent) since his retirement income is subject to a lower marginal tax rate. If a high GS were covered under Option 1-A rather than the current system, net replacement rates would be 35 percent lower since the retiree would be starting with a reduced benefit due to early retirement (which in addition has lost some purchasing power since it is only 70 percent indexed). Since benefits under Options 2-4 are fully taxed when received they would not be subject to this change in tax treatment. However, the current system still provides higher *net* replacement rates than any of the options at age 58.

Effect of Social Security Benefits on Replacement Rates

Another major change in replacement rates occurs under the integrated options when social security benefits commence at age 62. Although a full pension benefit would be provided from ages 55-61 under Option 2, the pension benefit would be offset by a percentage of the social security benefit at age 62. The offset has already been applied under Option 3 at age 55. Under Options 3 and 4, the social security benefit would supplement the pension benefit provided under the plans since age 55.

Employees are not covered under social security under the present system or Option 1. However, the current system has been included in the following table to show how the benefits under the various options compare more favorably at age 62.

TABLE A-3.—CHANGE IN GROSS REPLACEMENT RATES UPON RECEIPT OF SOCIAL SECURITY BENEFIT FOR 55/30 COMBINATION

GS level	Current system	Options			
		2	3	4-A	4-B
Low:					
At 55	53.4	42.7	25.9	24.7	16.4
At 62	53.4	51.5	50.8	52.9	44.7
Middle:					
At 55	52.5	42.0	31.0	27.0	19.6
At 62	52.5	45.8	43.6	43.5	36.1
High:					
At 55	53.4	42.7	31.7	35.9	26.5
At 62	53.4	46.4	44.1	52.3	42.9
Postal:					
At 55	53.4	42.7	25.0	29.9	20.3
At 62	53.4	52.3	51.8	59.9	50.3

Source: Congressional Service.

The social security benefit is of a relatively large value to lower income workers. In the case of the low GS and the postal service worker, earnings replacement rates approximately double under Option 3 when social security benefits begin at age 62. On the other hand, the high GS worker's gross replacement rate increases by only 39 percent. Similarly dramatic results are also found under the defined contribution plans (Options 4-A and 4-B) when the social security benefit is added at age 62 to the indexed benefit provided since age 55. This causes the gross replacement rate under Option 4-A to increase 28.2 percentage points (about 114 percent) for the low GS worker compared to a 16.4 percentage point increase (about 46 percent) for the high GS worker.

Option 2 was designed so that employees who wished to retire at age 55 with 30 years of service could save sufficient amounts over their careers to ensure a gross replacement rate similar to what they would have received under the present system. In addition, employees could also save amounts sufficient to provide inflation adjustments at 4 percent annually on these increased annuities. Presumably, this savings opportunity would be provided by automatic payroll deductions. Various investment strategies for this savings fund could be established. Table A-4 portrays this opportunity.

TABLE A-4.—COMPARISON OF REPLACEMENT RATES: CURRENT CSRS AND OPTION: 2 PERCENTAGE OF SALARY NEEDED TO BE SAVED TO REPLICATE CURRENT BENEFITS—AGE 55 WITH 30 YEARS OF SERVICE

	Low GS	Middle GS	High GS	Postal Service
Current system:				
Gross replacement rate (at retirement)	53.4	52.5	53.4	53.4
Net replacement rate (at age 70)	66.7	70.6	71.7	67.1
Option 2:				
Gross replacement rate (at retirement)	42.7	42.0	42.7	42.7
Net replacement rate (at age 70)	68.2	67.8	69.0	71.0

TABLE A-4.—COMPARISON OF REPLACEMENT RATES: CURRENT CSRS AND OPTION 2 PERCENTAGE OF SALARY NEEDED TO BE SAVED TO REPLICATE CURRENT BENEFITS—AGE 55 WITH 30 YEARS OF SERVICE—Continued

	Low GS	Middle GS	High GS	Postal Service
Annual savings rate (to retirement):				
Indexed (4 percent)	6.9	8.6	7.0	5.8
Nonindexed	3.6	4.3	3.4	3.0

Source: Hay Associates; Congressional Research Service.

Table A-4 shows that employees wishing to retire early would need to save between 3 and 4.3 percent over their careers to reach initial gross replacement rates equal to the current plan. If a 4 percent indexed annuity is desired, employees would need to save nearly twice this amount.

Because Option 2 is noncontributory, employees making more than the social security wage base would have additional disposable income to invest. However, observe that *net* replacement rates at age 70 under Option 2 nearly duplicate those of the current plan because of the value of the indexed social security benefit and the differences in tax treatment of benefits under the two systems. If a "career savings rate" feature had been selected, these retirees would have greater income at age 70 than under the current plan.

EFFECT OF WEIGHTED SOCIAL SECURITY BENEFIT

The social security benefit formula is designed to replace a larger portion of a lower earner's final salary than it does for a high earner. This is evident when the social security benefit is examined by itself on both a gross and net basis.

TABLE A-5.—SOCIAL SECURITY BENEFIT AND REPLACEMENT RATES FOR FULL-CAREER WORKERS FOR 65/40 COMBINATION

GS level	Monthly social security benefit (in retirement year dollars)	Gross replacement rate	Net replacement rate
Low	5,136	36.7	52.4
Middle	7,369	20.1	36.0
High	7,447	19.4	35.1
Postal Service	6,039	36.0	53.1

Source: Congressional Research Service.

The above table shows that the low GS worker and the postal worker will have much more of their gross and net earnings replaced by social security than the middle and high GS workers. This component of retirement is not taxed and will not change in the postretirement period since it is fully indexed.

While the social security benefit payable to the middle and high GS worker is higher in absolute dollars, it replaces a smaller proportion of the worker's final earnings. This is the primary advantage that lower GS and postal workers would have under any scheme to integrate civil service retirement benefits with social security. The current CSRS provides the same replacement rates for workers with the same amount of service, rather than tilting the benefit formula in favor of the lower paid. Even under a fully integrated plan, there is still some weighting of the combined civil service-social security benefit in favor of the lower paid. Moreover, if the individual were receiving a full spousal benefit, the social security benefit would be increased by 50 percent. In other words, the gross replacement rate for the lower GS worker would increase to 55 percent, whereas the high GS worker's replacement rate would increase to only 29 percent.

EFFECT ON REPLACEMENT RATES UPON REACHING AGE 65

When individuals reach age 65 several changes take place in their tax status that affect net replacement rates. First, individuals receiving a public pension lose the tax credit they received between retirement and age 65 (Schedule RP). Persons who receive benefits from the current CSRS are eligible for this tax credit (maximum amount of credit is $375 for single individuals in 1981).[1]

Second, at age 65 individuals become eligible for a Schedule R tax credit for the elderly. This tax credit is 15 percent of $2,500 for single individuals (up to the amount of tax liability). However, the $2,500 base is reduced by both social security benefits (on a dollar-for-dollar basis) and adjusted gross income (AGI) (on a 50 percent offset for AGI above $7,500). In our examples the offsets are always greater than $2,500 so that no one benefits from this tax credit.

Finally, all individuals are entitled to an additional personal exemption when they reach age 65. The net effect of these changes are: individuals receiving the Schedule RP tax credit before age 65 experience a slight drop in net replacement rates since the value of the additional personal exemption at 65 is less than the tax credit; individuals not receiving the Schedule RP tax credit before age 65 would experience a slight increase in their net replacement rates due to the effect of the additional personal exemption at age 65.

LONG-SERVICE WORKERS AT TIME OF RETIREMENT

The present CSRS formula provides higher replacement rates to employees who retire at age 55 with 30 years of service than is true for the other options. However, table A-6 shows that workers retiring with 40 years of service would generally have higher gross replacement rates under most of the options. There are several reasons why this happens.

First of all, workers with a 40-year work history would receive a higher social security benefit than if they had worked only 30 years, particularly low GS and postal workers who receive the weighted benefit. This accounts for part of the higher replacement rates. The other factor, which will be explained later, is the pension formula itself.

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[1] It is unclear whether individuals who receive benefits under the options considered in this paper which integrate with social security would qualify for this tax credit. Therefore, only those individuals receiving benefits under the current system or Option 1 were given the Schedule RP credit.

TABLE A-6. GROSS AND (NET) REPLACEMENT RATES AT TIME OF RETIREMENT FOR 65/40 COMBINATIONS

GS level	Options					
	Current system	1-A	2	3	4-A	4-B
Low	72.3	72.3	75.3	84.7	85.9	69.5
	(102.5)	(102.5)	(101.0)	(111.9)	(113.2)	(94.6)
Middle	72.3	72.3	67.0	76.5	76.3	61.1
	(127.9)	(127.9)	(100.5)	(110.7)	(110.5)	(93.5)
High	72.3	72.3	66.6	76.1	88.8	70.6
	(129.1)	(129.1)	(100.0)	(110.2)	(122.6)	(104.4)
Postal	72.3	72.3	74.9	84.4	93.5	75.0
	(105.8)	(105.8)	(103.0)	(114.0)	(124.1)	(103.1)

Source: Congressional Research Service.

Options 2, 3, and 4-A replace at least 100 percent of net earnings for full career employees. Even the least costly Option 4-B replaces over 100 percent of net earnings for the postal and the high GS level worker, while at the same time replacing well over 90 percent of the other workers' net earnings. While high- and mid-level GS workers may have higher net replacement rates at the time of retirement under the current system and Option 1, it must be remembered that the net replacement rate will drop dramatically when the civil service benefit becomes taxable. In fact, the net replacement rate for the high GS worker plummets to about 90 percent at age 68. This is shown in table A-11 in the next section.

Table A-6 shows that the replacement rates in Option 1 are identical to the current system at the time of retirement. However, as was explained earlier, the replacement rates will diminish over time since the benefits are only 70 percent indexed. Of course, this is precisely the reason why there are large cost savings attributable to this particular option.

While middle and high GS workers have lower gross replacement rates under Option 2, the rates for the low GS and postal worker are slightly higher. Not only are replacement rates for the lower earners significantly higher under Option 3, the rates for the middle and high GS workers are now also above those provided under the current system. Even though no credit is given in Option 3 for years of service over 35, replacement rates are still higher than under the current system, which are based on 40 years service.

The replacement rates under the defined contribution plans (Options 4-A and 4-B) at age 65 are about three times higher than they are at age 55 (table A-11) for several reasons. Not only has a social security benefit for a full working career been included in the replacement rates shown at age 65, but the contributions have accumulated with compound interest over 40 years, rather than 30 years. This additional 10 years makes a substantial difference in the individual's account balance. Moreover, an annuitant age 65, with a shorter life expectancy, would be able to purchase a higher lifetime annuity with the same amount of money than an annuitant age 55. Although Option 4-A produces the highest replacement rates of the options studied, Option 4-B produces much lower rates at the time of retirement because of its less generous contribution formula. Nonetheless, it still produces higher replacement rates than under Option 2 for the high GS level and the postal worker.

LONG-SERVICE WORKERS 15 YEARS AFTER RETIREMENT

Since pension benefits provided under Options 1-3 are not fully indexed with rises in prices, the replacement rates not only decline in the postretirement inflationary period, but in all cases they are lower than rates provided under the current system. This is not the case with the defined contribution plans. Not only do the replacement rates under Options 4-A and 4-B maintain their purchasing power during the postretirement period, the benefits provided under Option 4-A remain higher than the current system as shown in the following table. As stated earlier, however, the replacement rates presented in the following table for the defined contribution plans would not be as favorable if inflation exceeded the assumed rate of inflation.

TABLE A-7.—CHANGE IN GROSS AND (NET) REPLACEMENT RATES 15 YEARS AFTER RETIREMENT FOR 65/40 COMBINATION

GS level	Options					
	Current system	1-A	2	3	4-A	4-B
Low:						
At 65	72.3	72.3	75.3	84.7	85.9	69.5
	(102.5)	(102.5)	(101.0)	(111.9)	(113.2)	(94.6)
At 80	72.3	60.8	69.1	72.6	85.9	69.5
	(85.1)	(73.0)	(94.1)	(98.1)	(113.2)	(94.6)
Middle:						
At 65	72.3	72.3	67.0	76.5	76.3	61.1
	(127.9)	(127.9)	(100.5)	(110.7)	(110.5)	(93.5)
At 80	72.3	60.8	59.5	62.2	76.3	61.1
	(89.5)	(78.4)	(91.7)	(94.9)	(110.5)	(93.5)
High:						
At 65	72.3	72.3	66.6	76.1	88.8	70.6
	(129.1)	(129.1)	(100.0)	(110.2)	(122.6)	(104.4)
At 80	72.3	60.8	59.1	61.8	88.8	70.6
	(89.3)	(78.4)	(91.3)	(94.5)	(122.6)	(104.4)
Postal:						
At 65	72.3	72.3	74.9	84.4	93.5	75.0
	(105.8)	(105.8)	(103.0)	(114.0)	(124.1)	(103.1)
At 80	72.3	60.8	68.7	72.2	93.5	75.0
	(85.8)	(73.8)	(95.6)	(99.8)	(124.1)	(103.1)

Source: Congressional Research Service.

As explained earlier, Option 2 was designed to replicate the current CSRS system. Under Option 2, gross replacement rates have shifted in favor of lower income workers. After 15 years, although net replacement rates still favor lower income workers, the higher tax savings from pre- and postretirement income tax bracket reductions have resulted in fairly even net replacement rates across all income levels.

It should be noted that some of the eroding effects that inflation has on retirement income are partially absorbed because the social security component is fully indexed. Moreover, the social security component will become an increasingly large proportion over time.

For example, assume a retiree received a $100 indexed social security benefit and a $100 nonindexed pension at the time of retirement. Fifty percent of retirement income would be indexed. If the inflation rate after retirement was 7 percent, the social security benefit would be about $200 ten years later while the pension would still be $100. At this point in time, two-thirds of the retirement income would be indexed and so on.

SHORT-SERVICE WORKERS

All integrated options generally provide higher replacement rates for short-service workers whether they are high earners or low earners. The replacement rates in the following tables are based on 10 years of service (from 1982–91). A 10/40 proration has been made of the social security benefits for display purposes to reflect only service with the Federal Government.

TABLE A-8.—COMBINED GROSS REPLACEMENT RATES AT TIME OF RETIREMENT FOR 65/10 COMBINATION

GS level	Options					
	Current system	1–A	2	3	4–A	4–B
Low	15.1	15.1	18.9	22.9	21.3	17.5
Middle	15.0	15.0	16.3	20.8	16.5	13.3
High	15.4	15.4	16.3	20.8	18.3	14.5
Postal	15.4	15.4	18.6	22.7	21.1	17.1

Source: Congressional Research Service.

The most notable increase in replacement rates occurs under Option 3—particularly for the low GS employee and the postal worker. The low GS worker and the postal worker receive about a 50 percent higher replacement rate than would be received under the current system. Even under Option 4-B they receive higher gross earnings replacement. This is due to two reasons: (1) the relatively higher value of the social security benefit to the lower earner, and (2) the "backloading" benefit accrual rate under the CSRS. In addition, the benefit accrual component of Option 3 is 40 percent greater than the offset component. In Option 2, it is only 20 percent greater as shown in the following table.

TABLE A-9.—YEARLY BENEFIT AND OFFSET ACCRUAL

Option	A—benefit accrual	B—social security offset	Percentage A greater than B
2	1.5	1.25	20
3	2.0	1.43	40

Source: Congressional Research Service.

TERMINATION OF EMPLOYMENT BEFORE RETIREMENT

When an individual terminates employment with the Federal Government prior to reaching retirement age, the usual practice is for the worker to withdraw his contributions from the Civil Service

Retirement Fund. This is particularly true for younger, short-service workers. Upon doing so, the individual forfeits all rights to a pension.

This forfeiture would not be allowed in the private sector. In the private sector, an employer is not able to terminate his liability. Under the Employee Retirement Income Security Act of 1974 (ERISA) law, an employee may withdraw his own contributions, if any, to his employer's plan upon termination of employment. If at least 50 percent vested, the individual will still remain eligible to receive a reduced pension upon reaching retirement age based on the value of the employer's contribution. Thus, employees leaving the government prior to retirement under Options 2–4 would at least be assured of receiving some benefits at retirement.

The time interval between when a worker terminates a job and when the pension begins significantly affects the value of the benefits received. Consider the following: two middle GS workers of the same age are covered by Option 2 but during different periods of their working careers. Employee A begins working for the Federal Government in 1982 at age 25 and terminates his employment 10 years later. He does not apply for retirement until he turns age 65 with 40 years under social security. Employee B, however, does not become employed by the government until he becomes age 55. Employee B also works 10 years and applies for retirement at age 65. Even though both workers had identical career earnings histories and were covered under the CSRS plan for 10 years, their pensions are vastly different. The replacement rate for employee B is 3.7 times greater than the replacement rate for employee A.

Since the purchasing power of future pensions that will be payable to younger employees who terminate employment sufficiently in advance of retirement age will be greatly reduced because of preretirement inflation, most will simply take back their own contributions without interest and forfeit all rights to a future pension. This "freezing" effect would also be felt not only under the current CSRS, but also under the other defined benefit options. However, since no employee contributions are required, vested benefits would not be forfeited upon termination of employment. A further advantage to younger, short-service workers is found under Option 4. Under Option 4, the employee could leave the amount accumulated in his defined contribution account with the government or make a "tax-free" rollover of the account balance into an Individual Retirement Account (IRA). In both cases, the funds could continue to earn interest while being sheltered from current taxation until withdrawn at retirement.

Thus, Options 2–4 generally would be more favorable to younger workers with short periods of Federal service, particularly under the defined contribution plan outlined in Option 4–A.

The following three tables present gross and net replacement rates resulting from employer-provided benefits for the age/service combinations selected. The replacement rates shown under Options 4–A and 4–B *do not* include the benefit that could be purchased by employee contributions to the thrift plan. This is discussed in the section that follows the tables.

TABLE A-10.—GROSS AND (NET) REPLACEMENT RATES OF FINAL YEAR PAY FOR EMPLOYEES HIRED OCT. 1, 1982, WHO RETIRE AT AGE 55 WITH 30 YEARS OF SERVICE AT RETIREMENT

	Low GS	Middle GS	High GS	Postal Service
Current system:				
At retirement	53.4 (73.9)	52.5 (89.8)	53.4 (92.3)	53.4 (76.0)
At 58	53.4 (65.2)	52.5 (69.5)	53.4 (70.5)	53.4 (65.8)
At 70	53.4 (64.2)	52.5 (69.5)	53.4 (70.6)	53.4 (65.0)
Option 1:				
At retirement	45.4 (62.8)	44.6 (76.3)	45.4 (78.5)	45.4 (64.6)
At 58	43.8 (54.8)	43.1 (58.9)	43.8 (59.9)	43.8 (55.2)
At 70	38.1 (48.8)	37.5 (52.1)	38.1 (53.1)	38.1 (48.1)
Option 2:				
At retirement	42.7 (51.6)	42.0 (57.2)	42.7 (58.2)	42.7 (52.3)
At 62	51.5 (69.6)	45.8 (70.3)	46.4 (71.6)	52.3 (72.4)
At 70	49.5 (68.2)	43.2 (67.8)	43.8 (69.0)	50.3 (71.0)
Option 3:				
At retirement	25.9 (33.1)	31.0 (43.9)	31.7 (45.0)	25.0 (32.4)
At 62	50.8 (68.8)	43.6 (67.5)	44.1 (68.6)	51.8 (71.8)
At 70	47.6 (66.0)	39.7 (63.0)	40.1 (64.1)	48.7 (69.0)
Option 4:				
4-A indexed:				
At retirement	24.7 (31.7)	27.0 (38.7)	35.9 (50.0)	29.9 (38.0)
At 62	52.9 (71.1)	43.5 (67.3)	52.3 (78.8)	59.9 (81.1)
At 70	52.9 (72.2)	43.5 (68.2)	52.3 (79.7)	59.9 (82.1)
4-B indexed:				
At retirement	16.4 (22.3)	19.6 (28.8)	26.5 (38.3)	20.3 (26.9)
At 62	44.7 (61.7)	36.1 (57.4)	42.9 (67.0)	50.3 (70.0)
At 70	44.7 (62.4)	36.1 (58.1)	42.9 (67.9)	50.3 (70.9)

Source: Congressional Research Service.

TABLE A-11.—GROSS AND (NET) REPLACEMENT RATES OF FINAL YEAR PAY FOR EMPLOYEES HIRED OCT. 1, 1982, WHO RETIRE AT AGE 65 WITH 40 YEARS OF SERVICE AT RETIREMENT

	Low GS	Middle GS	High GS	Postal Service
Current system:				
At retirement	72.3 (102.5)	72.3 (127.9)	72.3 (129.1)	72.3 (105.8)
At 68	72.3 (85.1)	72.3 (89.5)	72.3 (89.3)	72.3 (85.8)
At 80	72.3 (85.1)	72.3 (89.5)	72.3 (89.3)	72.3 (85.8)
Option 1:				
At retirement	72.3	72.3	72.3	72.3

TABLE A-11.—GROSS AND (NET) REPLACEMENT RATES OF FINAL YEAR PAY FOR EMPLOYEES HIRED OCT. 1, 1982, WHO RETIRE AT AGE 65 WITH 10 YEARS OF SERVICE AT RETIREMENT—Continued

	Low GS	Middle GS	High GS	Postal Service
	(102.5)	(127.9)	(129.1)	(105.8)
At 68	69.9	69.9	69.9	69.9
	(82.6)	(87.3)	(87.0)	(83.2)
At 80	60.8	60.8	60.8	60.8
	(73.0)	(78.4)	(78.4)	(73.8)
Option 2:				
At retirement	75.3	67.0	66.6	74.9
	(101.0)	(100.5)	(100.0)	(103.0)
At 80	69.1	59.5	59.1	68.7
	(94.1)	(91.7)	(91.3)	(95.6)
Option 3:				
At retirement	84.7	76.5	76.1	84.4
	(111.9)	(110.7)	(110.2)	(114.0)
At 80	72.6	62.2	61.8	72.2
	(98.1)	(94.9)	(94.5)	(99.8)
Option 4:				
4-A indexed:				
At retirement	85.9	76.3	88.8	93.5
	(113.2)	(110.5)	(122.6)	(124.1)
At 80	85.9	76.3	88.8	93.5
	(113.2)	(110.5)	(122.6)	(124.1)
4-B indexed:				
At retirement	69.5	61.1	70.6	75.0
	(94.6)	(93.5)	(104.4)	(103.1)
At 80	69.5	61.1	70.6	75.0
	(94.6)	(93.5)	(104.4)	(103.1)

Source: Congressional Research Service.

TABLE A-12.—GROSS AND (NET) REPLACEMENT RATES FOR FINAL YEAR PAY FOR EMPLOYEES HIRED OCT. 1, 1982, WHO RETIRE AT AGE 65 WITH 10 YEARS OF SERVICE AT RETIREMENT

	Low GS	Middle GS	High GS	Postal Service
Current system:				
At retirement	15.1	15.0	15.4	15.4
	(19.6)	(21.8)	(24.8)	(21.0)
At 68	15.1	15.0	15.4	15.4
	(19.6)	(21.8)	(24.0)	(21.0)
At 80	15.1	15.0	15.4	15.4
	(19.6)	(21.8)	(24.0)	(21.0)
Option 1-A:				
At retirement	15.1	15.0	15.4	15.4
	(19.6)	(21.8)	(24.8)	(21.0)
At 68	14.6	14.4	14.9	14.9
	(19.0)	(21.0)	(23.4)	(20.3)
At 80	12.7	12.6	13.0	13.0
	(16.5)	(18.3)	(20.8)	(17.7)
Option 2:				
At retirement	18.9	16.6	16.3	18.6
	(24.8)	(24.5)	(25.5)	(25.6)
At 80	17.5	14.9	14.4	17.0
	(22.9)	(21.9)	(23.0)	(23.4)
Option 3:				
At retirement	22.9	20.8	20.8	22.7
	(29.9)	(30.1)	(31.5)	(31.3)
At 80	19.6	17.0	16.6	19.2
	(25.6)	(25.0)	(25.8)	(26.4)

TABLE A-12.—GROSS AND (NET) REPLACEMENT RATES FOR FINAL YEAR PAY FOR EMPLOYEES HIRED OCT. 1, 1982, WHO RETIRE AT AGE 65 WITH 10 YEARS OF SERVICE AT RETIREMENT—Continued

	Low GS	Middle GS	High GS	Postal Service
Option 4:				
4-A indexed:				
At retirement	21.3	16.5	18.3	21.1
	(27.9)	(24.3)	(28.2)	(29.1)
At 80	21.3	16.5	18.3	21.1
	(27.9)	(24.3)	(28.2)	(29.1)
4-B indexed:				
At retirement	17.5	13.3	14.5	17.1
	(22.9)	(19.5)	(23.1)	(23.5)
At 80	17.5	13.3	14.5	17.1
	(22.9)	(19.5)	(23.1)	(23.5)

Source: Congressional Research Service.

BENEFITS UNDER COMBINED THRIFT AND DEFINED CONTRIBUTION PLANS

Options 4-A and 4-B permit employees to participate in a thrift plan that provides additional employer benefits over and above the automatic defined contribution plan. The previous tables assumed that employees elected to participate in the thrift plan and showed, in addition to social security, the combined replacement rates that would be provided based solely on *employer* contributions. They do not show the value of the additional retirement benefits that could be purchased by employee's own contributions to the thrift plan. On the other hand, if employees chose not to participate in the thrift plan or contributed less than 6 percent of their salaries, replacement rates would be lower.

Column 1 of the following table shows the gross replacement rates that would be provided from the defined contribution plan *alone* if the employee does not participate in the thrift plan. In this case the government would be contributing 9 percent and 16 percent of salary, respectively, above and below the $20,000 break point, rather than 15 percent/22 percent. Column 2 shows the value of employer-provided benefits if the employee elects to participate in the thrift plan. Column 3 shows how these replacement rates would be increased by incorporating the benefit that could be purchased based upon the employee's contributions to the thrift plan. Of course, if the employee contributed less than 6 percent of salary to the thrift plan, the employer would match a lower amount. This would in turn produce lower replacement rates than shown in columns 2 and 3. It should be noted that in all cases the replacement rates include the social security benefit.

TABLE A-13.—GROSS REPLACEMENT RATES UNDER VARIATIONS TO OPTION 4-A RETIREMENT SYSTEM FOR 65/40 COMBINATION AT RETIREMENT

	Option with thrift plan			No thrift plan, but higher employer contributions to automatic benefits
		Does participate		
	Does not participate in thrift plan	Benefits from employer contributions only	Full benefits including employee contributions	
Low GS	66.2	85.9	105.6	76.1
Middle GS	58.0	76.3	94.6	67.2
High GS	67.0	88.8	110.5	77.9
Postal	71.3	93.5	115.7	82.4

Source: Congressional Research Service.

Table A-13 shows that when most employees contribute 6 percent of their salaries to the thrift plan, they would have more gross income in retirement than they had while working. Those employees not participating would have only about two-thirds of their gross earnings replaced from the defined contribution plan alone as shown in column 1. However, if net preretirement earnings were considered, the retirement income would enable full career employees to closely maintain their standard of living in retirement.

Estimates of costs for Option 4-A assumed that half of the employees would participate in the thrift plan which would trigger a matching employer contribution. Thus, if employer contributions flowing to the automatic provisions were kept constant, and no thrift plan was offered (or fewer than half participated), then additional savings over those estimated would result. However, if the option is designed to keep the government's cost the same but not to offer a thrift plan, more funds could be directed into the defined contribution plan. In other words, employer contributions that would have been made only to thrift plan participants would now be spread evenly among all workers. While this would reduce employer-provided benefits otherwise flowing to thrift plan participants, it would increase the benefits payable to those employees who would not have chosen to participate. Retirement benefits resulting from this redistribution of employer contributions is shown in column 4.

Lastly, table A-13 shows that the fundamental trade-off in Option 4-A is betwen employee discretion and higher replacement rates, and not between higher replacement rates and higher employer costs. In Option 4-A, if employees contribute to the thrift plan, they can receive higher benefits than they can receive if no thrift plan is offered. In either case, the cost to the government is identical, assuming that 50 percent of employees participate in the thrift plan.

APPENDIX B: DOCUMENTATION OF REPLACEMENT RATE ANALYSIS

PENSION PLAN MODEL

In order to test the effects of restructuring the Civil Service Retirement System (CSRS) on earnings replacement rates, a retirement security microsimulation model was developed. The model has the capacity to calculate earnings replacement rates under a broad variety of pension plans which may or may not be integrated with social security. Specifically, the model can tell the effects that different factors may have on earnings replacement rates for wage earners under various assumptions regarding earnings, work histories, type of plan, and rate of inflation. The calculations may be done for both single and married wage earners before and after taxes in the first year of retirement and at later times (such as five years after retirement). This permits the effects of income taxes and inflation to be factored in on "real" replacement rates since social security benefits *are not* taxed and also are *automatically* indexed to the CPI while most benefits under our restructuring options *are taxed* and are indexed to varying percentages of increases in the cost of living.

The model can calculate social security benefits under the various computation formulas used in the program. Specifically, it can calculate the retirement income received by: (1) those workers who became age 62 prior to 1979 (i.e., whose benefits are calculated under the old benefit formula), (2) those workers who become age 62 after 1983 (i.e., whose benefits are calculated under the new benefit formula that was established by the 1977 Amendments to the Social Security Act), and (3) those workers who become age 62 after 1978 and before 1984 (i.e., whose benefits are calculated under the old benefit formula or under the new benefit formula, whichever is higher). The model also can calculate disability and survivor benefit amounts under the old benefit formula as well as under the new formula.

PENSION PLAN FORMULAS

This section presents, in detail, the formulae used to calculate pension benefits under the options presented in the Appendix A, Analysis of Earnings Replacement Rates. It should be noted that although the salary base used to determine pension benefits was usually High-3, the replacement rates themselves were based on replacement of final years' earnings.

CURRENT CSRS—RETIREMENT CONDITIONS/FORMULA

Retirement eligibility: Age 55 and 30 years service; age 60 and 20 years service; age 65 and 5 years service.

Salary base = average of high 3 years' salary.

Formula = [(1.5 percent × salary base × service 1-5 years) + (1.75 percent × salary base × service 5-10 years) + (2 percent × salary base × service 10 or more years)] − early retirement reduction.

Maximum amount = 80 percent of salary base.

Early retirement reduction: none.

OPTION 1-A—RETIREMENT CONDITIONS/FORMULA

Salary base=average of high 3 years' salary.

Formula=[(1.5 percent × salary base × service 1-5 years)+(1.75 percent × salary base × service 5-10 years)+(2 percent × salary base × service 10 or more years.)]−early retirement reduction.

Maximum amount=80 percent of salary.

Adjusted to 70 percent of CPI.

Early retirement reduction: 3 percent per year for retirement before age 60; effective beginning in year 2000.

OPTION 2—RETIREMENT CONDITIONS/FORMULA

Retirement eligibility: Age 55 and 30 years service; age 60 and 20 years service; age 62 and 5 years service.

Salary base=average of high 3 years' salary.

Formula=[(60 percent of salary base)−(50 percent of PIA (at age 65))] (reduced proportionately for years of service under 40).

Formula=[(1.5 percent × years of service up to 40 × salary base)−(1.25 percent × years of service up to 40 × PIA[1])].

Indexed at 70 percent of CPI.

Early retirement reductions: None.

OPTION 3—RETIREMENT CONDITIONS/FORMULA

Retirement eligibility: Age 65 with 5 years service.

Salary base=average of high 3 years' salary.

Formula=[(70 percent of salary base)−(50 percent of PIA at age 65)] (reduced proportionately for service less than 35 years).

Formula=[(2.0 percent × years of service up to 35 × salary base)−(1.43 percent × years of service up to 35 × PIA)].

Indexed at 50 percent of CPI.

Early retirement reduction: 3 percent per year for retirement before age 65.

OPTIONS 4-A AND 4-B—RETIREMENT CONDITIONS/FORMULA

Retirement at age 65 with 5 years of service or 55 with 10 years of service.

Annuity: Indexed to 100 percent of assumed CPI increases and based on principal available at retirement from contributions of employer and earnings of contributions.

Contributions (employer):

4-A: (15 percent of earnings up to $20,000)+(22 percent of earnings over $20,000) [2].

4-B: (10 percent of earnings up to $20,000)+(17 percent of earnings over $20,000) [2].

NOTE ON SOCIAL SECURITY PIA CALCULATIONS

Although social security benefits do not begin until age 62, all of our options have provisions for retirement at ages before 62. In those examples in which individuals retire early, but will receive social security benefits at age 62, their PIA was determined by assuming zero earnings between retirement and the beginning of social security and the "bend points" used in determining the PIA were indexed to the year normally used to determine benefits at age 62.

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[1] Offset not applied until social security benefits begin.

[2] Includes employer contribution to thrift plans; $20,000 break point indexed to increase in wage growth rate.

ECONOMIC ASSUMPTIONS

Calculation of social security, civil service retirement, and alternative retirement system benefits and pre- and postretirement taxes for persons beginning civil service employment in 1982 and retiring at some point in the future requires that a number of economic and demographic assumptions be made. For example, the calculation of social security benefits in the future requires assumptions about future wage growth rates (both for determining average yearly wages and the maximum taxable wage base). Also, for the determination of an annuity that can be purchased under the Option 4 defined contribution plans, mortality rates must be used and assumptions about future interest rates must be made.

For the calculation of replacement rates in this paper, assumptions were made about the following: changes in the CPI, wage growth rates, future discount rates, mortality rates, and income tax schedules and credits.

WAGE GROWTH, CONSUMER PRICE INDEX, INTEREST RATES

The replacement rate analysis required the use of both historical data and future projections for these three parameters.

HISTORICAL DATA

Salary increases (1951-1981). The percentage annual increase in salary is based upon salary increases at the GS-3, step 1 and GS-12, step 1 levels. The percentage increase for each year at both levels was calculated and then averaged.

Consumer Price Index (1951-1981). The percentage increase is calculated using the CPI for all items as reflected in the *Statistical Abstract of the United States.* The 1981 figure reflects the increase from June 1980 until June 1981.

Interest rates (1951-1981). The interest rate is derived from the interest rate of U.S. Government composite securities, defined as being "unweighted averages for all outstanding notes and bonds neither due nor callable in less than 10 years, including several very low yielding 'flower' bonds." The 1981 rate is derived from the average of the interest rates for the months of May, June, July, August, and September. The interest rates were obtained from statistics of the Board of Governors of the Federal Reserve System.

Future Projections (1982-2050). The future projections are based upon the Social Security II-B assumptions for average wages in covered employment, the CPI, and average annual interest rate.

TABLE B-1.—ECONOMIC ASSUMPTIONS

Year	Salary increase	CPI increase	Interest increase
1951	1.000	1.079	(1)
1952	1.000	1.022	(1)

TABLE B-1.—ECONOMIC ASSUMPTIONS—Continued

Year	Salary increase	CPI increase	Interest increase
1953	1.000	1.007	(1)
1954	1.000	1.005	(1)
1955	1.075	1.000	(1)
1956	1.000	1.015	(1)
1957	1.000	1.036	(1)
1958	1.104	1.027	(1)
1959	1.000	1.008	(1)
1960	1.072	1.016	(1)
1961	1.000	1.010	(1)
1962	1.037	1.011	(1)
1963	1.000	1.012	(1)
1964	1.065	1.013	(1)
1965	1.066	1.017	(1)
1966	1.029	1.029	(1)
1967	1.047	1.029	(1)
1968	1.046	1.042	(1)
1969	1.149	1.054	(1)
1970	1.000	1.059	(1)
1971	1.060	1.043	(1)
1972	1.109	1.033	(1)
1973	1.047	1.062	(1)
1974	1.060	1.110	(1)
1975	1.045	1.091	(1)
1976	1.048	1.058	(1)
1977	1.070	1.064	(1)
1978	1.055	1.077	(1)
1979	1.070	1.113	(1)
1980	1.091	1.139	(1)
1981	1.101	1.096	(1)
1982	1.096	1.094	1.099
1983	1.097	1.090	1.091
1984	1.088	1.082	1.084
1985	1.081	1.074	1.079
1986	1.073	1.066	1.074
1987	1.068	1.058	1.071
1988	1.062	1.050	1.067
1989	1.055	1.042	1.064
1990	1.054	1.040	1.061
1991	1.055	1.040	1.061
1992	1.055	1.040	1.061
1993	1.055	1.040	1.061
1994	1.055	1.040	1.061
1995	1.055	1.040	1.061
1996	1.055	1.040	1.061
2050	1.055	1.040	1.061

[1] Interest increases prior to 1982 not used in analysis.

Source: Hay Associates.

MORTALITY RATES

In order to determine the amount of an annuity that can be purchased for a given amount of principal, information on the life expectancy of the annuitant is needed. The following mortality rates were used in this anaylsis. These rates were determined by the Office of Personnel Management and are for male civil service workers.

TABLE B-2. MORTALITY

Age	Probability of death at age	Age	Probability of death at age
40	0.0027	71	0.0365
41	.0030	72	.0401
42	.0032	73	.0439
43	.0034	74	.0477
44	.0038	75	.0522
45	.0041	76	.0572
46	.0044	77	.0628
47	.0049	78	.0700
48	.0052	79	.0784
49	.0057	80	.0792
50	.0061	81	.0860
51	.0067	82	.0932
52	.0073	83	.1008
53	.0079	84	.1080
54	.0086	85	.1170
55	.0094	86	.1260
56	.0102	87	.1359
57	.0111	88	.1467
58	.0120	89	.1575
59	.0130	90	.1692
60	.0141	91	.1827
61	.0153	92	.1969
62	.0167	93	.2133
63	.0182	94	.2295
64	.0198	95	.2466
65	.0214	96	.2637
66	.0236	97	.2853
67	.0257	98	.3060
68	.0282	99	.3267
69	.0306	[1] 100	1.0000
70	.0333		

[1] And over

Source: Hay Associates.

TAX ASSUMPTIONS

FEDERAL INCOME TAX ASSUMPTIONS

Pension benefits are subject to Federal, State, and local government personal income taxes whereas social security benefits are not. Therefore, the computation of the net earnings replacement rate (NERR) takes these taxes into account. In addition, an individual's wages and salaries are subject to Federal, State, and local government personal income tax as well as employee payroll deductions under the Federal Insurance Contributions Act (FICA) up to the maximum taxable wage base. The wages and salaries of GS workers are subject to a mandatory 7 percent deduction for contributions to the CSRS. These factors were also taken into consideration in determining net earnings in the final year of employment. Thus, the NERR equals:

$$\mathrm{NERR} = \frac{\mathrm{NRE}}{\mathrm{NFYE}}$$

where net final year's earnings (NFYE) equals gross earnings (GE) minus personal income taxes and FICA or CSRS payroll deductions, and net retirement earnings (NRE) equals social security and pension benefits minus applicable personal income taxes.

Following are the tax assumptions used in calculating Federal income tax liability:

1. Federal income tax is based on the Economic Recovery Tax Act of 1981 and uses the tax rate schedule for 1982.
2. Taxes are calculated in "real dollars," that is, the tax rate schedule is indexed for inflation to prevent "bracket creep."
3. Income in final year is entirely made up of wages and salaries.
4. Retirement income is comprised solely of social security and any pension benefits.
5. Tax credit is computed for schedules "R" and "RP."

When adjusted gross income (AGI) exceeds $10,000 for single taxpayers and $14,783 for married taxpayers (indexed for inflation), taxable income (TXINC) is computed using a generalized formula for itemizing rather than using the standard deduction.

The generalized formula for itemizing is: TXINC = AGI − ((Exempt amount + 23 percent × AGI) − Zero Bracket Amount).

The 23-percent rate is the current estimate of the average itemized deduction per return as a percent of AGI used by the Joint Committee on Taxation in making revenue projections.[3]

The $10,000 breakpoint for single individuals and the $14,783 breakpoint for married individuals was determined by equating the formula used for finding the amount of taxable income for persons taking the standard deduction with those taking the itemized deduction. This equating of formulae determines the point of AGI at which the standard deduction will have the same effect on taxable income as will itemized deductions. Below this point of AGI, the standard deduction will be more advantageous to the taxpayer; above it, the itemized deduction will be better as shown below:

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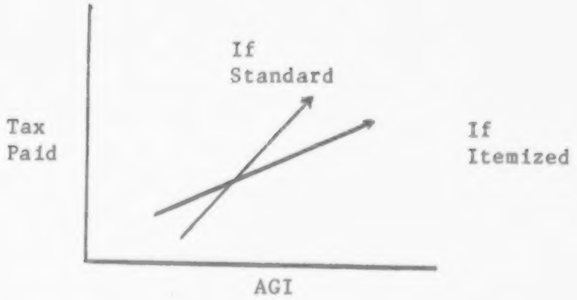
[3] See, for example, Economic Recovery Tax Act of 1981; Report of the Committee on Finance on H.J. Res. 266; Rpt. No. 97-144; p. 32.



Single taxpayer:

$$AGI - (1000 + (.23 \times AGI) - 2300) = AGI - 1000$$
$$.23 \times AGI = 2300$$
$$AGI = 2300 \div .23 = \$10,000$$

Married taxpayer:

$$AGI - (2000 + (.23 \times AGI) - 3400) = AGI - 2000$$
$$.23 \times AGI = 3400$$
$$AGI = 3400 \div .23 = \$14,783$$

STATE AND LOCAL GOVERNMENT INCOME TAX ASSUMPTIONS

There is great disparity in the tax structure of State and local governments. For purposes of computing net earnings replacement rate (NERR), a general assumption was made that State-local personal income tax liability was 21.5 percent of the Federal income tax liability for single taxpayers, and 22.6 percent for married taxpayers. These rates were derived from an analysis of the relationship of State individual income taxes on specified wages and salaries during calendar year 1975 contrasted to Federal income taxes prepared in 1976 by Lillian Rymarowicz of the Economics Division in the Congressional Research Service. This analysis showed that average State taxes as a percentage of the Federal income tax was 21.5 percent for single taxpayers and 22.6 percent for married taxpayers. This analysis, however, did not include individual income taxes levied by local governments or tax credits for such payments against State income tax liability. Therefore, the ratio would be understated. However, States are beginning to index their individual income tax rates for inflation. This has the effect of lowering tax rates for higher income individuals.[4]

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[4] In an article entitled "Battle of the Heavyweights: SS vs. Private Pension Plans" appearing in the January 1979 issue of *Pension World*, Alicia Munnel utilized a 13.1 percent rate for determining the relationship between State and local income tax and Federal income tax for determining retirement income equivalents needed for married couples retiring in January 1976. In 1974 State and local tax receipts were 13.1 percent of Federal income tax receipts. Ms. Munnel stated, "This percentage probably rose in 1975 because Federal taxes were decreased while State taxes increased." A comparison of direct tax burdens between Federal and State-local personal income taxes borne by average families during 1977 is contained in the May 1979 Advisory Commission on Intergovernmental Relations publication M-115 entitled "Significant Features of Fiscal Federalism 1978-79 Edition." This analysis shows a ratio of 18.8 percent between Federal and State-local taxes for an average family. An average family was defined as one having $16,000 of income in 1977 assuming all income was from wages and salaries and earned by one spouse. (By way of comparison, the estimated State-local tax liabilty for a family

TABLE B-3.—TAX RATE SCHEDULES FOR SINGLE INDIVIDUALS

Taxable income	1981 [1]		1982	
	Pay plus—	Percent on excess [2]	Pay plus—	Percent on excess [2]
0 to 2,300	0	0	0	0
$2,300 to $3,400	0	14	0	12
$3,400 to $4,400	$154	16	$132	14
$4,400 to $6,500	314	18	272	16
$6,500 to $8,500	692	19	608	17
$8,500 to $10,800	1,072	21	948	19
$10,800 to $12,900	1,555	24	1,385	22
$12,900 to $15,000	2,059	26	1,847	23
$15,000 to $18,200	2,605	30	2,330	27
$18,200 to $23,500	3,565	34	3,194	31
$23,500 to $28,800	5,367	39	4,837	35
$28,800 to $34,100	7,434	44	6,692	40
$34,100 to $41,500	9,766	49	8,812	44
$41,500 to $55,300	13,392	55	12,068	50
$55,300 to $81,800	20,982	63	18,968	50
$81,800 to $108,300	37,677	68	32,218	50
$108,300	55,697	70	45,468	50

[1] The CCH-prepared rate schedule shown above for 1981 is the same rate schedule that applied for 1980 taxes. A taxpayer may use this schedule to find the approximate taxes due for 1981 by computing the tax under the schedule and reducing the result by 1.25 percent. The IRS is expected to issue an official 1981 rate schedule that will incorporate the 1981 1.25-percent tax cut.

[2] The amount by which the taxpayer's taxable income exceeds the base of the bracket.

Source: Commerce Clearing House.

TABLE B-4.—TAX RATE SCHEDULES FOR MARRIED INDIVIDUALS FILING JOINT RETURNS AND SURVIVING SPOUSES

Taxable income	1981 [1]		1982	
	Pay plus—	Percent on excess [2]	Pay plus—	Percent on excess [2]
0 to $3,400	0	0	0	0
$3,400 to $5,500	0	14	0	12
$5,500 to $7,600	$294	16	$252	14
$7,600 to $11,900	630	18	546	16
$11,900 to $16,000	1,404	21	1,234	19
$16,000 to $20,200	2,265	24	2,013	22
$20,200 to $24,600	3,273	28	2,937	25
$24,600 to $29,900	4,505	32	4,037	29
$29,900 to $35,200	6,201	37	5,574	33
$35,200 to $45,800	8,162	43	7,323	39
$45,800 to $60,000	12,720	49	11,457	44
$60,000 to $85,600	19,678	54	17,705	49
$85,600 to $109,400	33,502	59	30,249	50
$109,400 to $162,400	47,544	64	42,149	50
$162,400 to $215,400	81,464	68	68,649	50
$215,400	117,504	70	95,149	50

[1] The CCH-prepared rate schedule shown above for 1981 is the same rate schedule that applied for 1980 taxes. A taxpayer may use this schedule to find the approximate taxes due for 1981 by computing the tax under the schedule and reducing the result by 1.25 percent. The IRS is expected to issue an official 1981 rate schedule that will incorporate the 1981 1.25-percent tax cut.

[2] The amount by which the taxpayer's taxable income exceeds the base of the bracket.

Source: Commerce Clearing House.

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earning twice the average family ($32,000) was 19.6 percent of the Federal tax liability). In any event, the effect on income replacement rates by using different assumptions for State and local taxes is insignificant.

FEDERAL CAREER SAMPLES

In order to illustrate the effect of the CSRS restructuring options discussed in this paper, four hypothetical Federal career cases were constructed. In all cases the worker begins his Federal career on October 1, 1982 and works for the Federal Government for either 10, 30, or 40 years before retiring. In each case, the salary levels for the career histories outlined below reflect the Federal pay scale as of October 1, 1982. The actual salary for each year of a person's career was then estimated by inflating the 1982 pay scale to the proper year using the Social Security II-B wage growth assumption. The pay cap of $50,112, in effect in 1981, was allowed to rise with the wage growth rate. For short-service workers (10 years of service), wages were projected backwards from 1981 for purposes of computing full social security benefits.

LOW SALARY (CLERK)

The wage history is based upon a starting level of GS-3, step 1. It is assumed that in-grade step increases occur at the time eligibility is met, e.g., an increase from step 1 to step 2 occurs after 52 weeks of service and an increase from step 5 to step 6 occurs after 104 weeks. Grade increases occur after 7 years of service, i.e., this employee becomes a GS-4 after 7 years of service and a GS-5 after 14 years of service. The employee reaches his or her career level high of GS-5, step 10 after 26 years of service.

MID-SALARY (COLLEGE GRADUATE)

This employee is hired at the GS-5, step 1 level, and advances two grade levels each year for the next two years so that at year 3, he or she is employed at the GS-9, step 1 level. In the fifth year, this employee advances to grade 11, and at year 8 to the GS-12 level. This employee becomes a GS-13 in year 13; and reaches his or her career level high of GS-13, step 10 at year 30.

HIGH SALARY (COLLEGE GRADUATE)

This employee enters service at the GS-12, step 1 level and advancement is at a rapid pace. In year 2, he or she is a GS-13, in year 4, a GS-14, in year 8, a GS-15, in year 14, a GS-16. In-grade step increases occur at the time of eligibility, (up to pay cap).

POSTAL EMPLOYEES

Typical U.S. Postal Service salary progression differs radically from the other Federal careers outlined above. Typical postal service employment commences at the postal grade-5 level. There is no grade increase but in-grade step increases are rapid. The employee reaches his or her career level high of grade 5, step 12 after 8 years of service. The salaries do not coincide with a Federal employee at a comparable level and were obtained from the Postal Service Schedule, Full-Time Annual Rates, effective July 25, 1981.

TABLE B-5.—FEDERAL CAREER SAMPLES WAGE HISTORIES (1ST YEAR OF SERVICE: 1982)

Years of service	GS low	GS mid	Postal employees	GS high
1	11,218	14,088	19,510	30,957
2	12,715	19,144	21,668	40,381
3	14,281	25,478	23,864	45,400
4	15,920	28,460	26,109	56,123
5	17,082	35,756	28,350	62,227
6	18,797	39,462	30,993	68,603
7	19,962	43,261	33,295	75,133
8	22,947	51,282	36,329	83,014
9	24,186	55,854	38,290	87,497
10	26,290	60,826	40,396	92,309
11	27,736	66,179	42,618	97,386
12	30,122	69,819	44,962	102,742
13	31,779	79,621	47,435	108,393
14	33,527	86,802	50,044	114,355
15	38,433	94,530	52,796	120,644
16	40,547	102,848	55,700	127,280
17	43,889	108,505	58,764	134,280
18	46,303	117,941	61,996	141,665
19	50,412	124,428	65,405	149,457
20	53,185	135,136	69,003	157,677
21	57,667	142,568	72,798	166,349
22	60,839	154,706	76,802	175,499
23	64,185	163,215	81,026	185,151
24	69,543	176,979	85,482	195,334
25	73,368	186,713	90,184	206,078
26	77,404	196,982	95,144	217,412
27	83,807	213,432	100,377	229,370
28	88,417	225,171	105,897	241,985
29	93,280	237,555	111,722	255,294
30	98,410	257,221	117,866	269,335
31	103,823	271,368	124,349	284,149
32	109,533	286,293	131,188	299,777
33	115,557	302,039	138,404	316,265
34	121,913	318,651	146,016	333,659
35	128,618	336,177	154,047	352,010
36	135,692	354,667	162,519	371,371
37	143,155	374,174	171,458	391,796
38	151,029	394,753	180,888	413,345
39	159,335	416,465	190,837	436,079
40	168,099	439,370	201,333	460,063

Source: Hay Associates

APPENDIX C: THE ISSUE OF SOCIAL SECURITY COVERAGE

The development of the issue of social security coverage for Federal workers is discussed briefly above. This issue has been examined before—most recently by the report of the Universal Coverage Study Group. The Study Group's report analyzed in depth the current Civil Service Retirement System (CSRS) and developed a rationale for and some implications of covering noncovered employees by social security.

No attempt is made in this report to duplicate the work of the Universal Coverage Study Group or other groups which have studied this issue. However, in this appendix an explanation of some of the issues raised by social security coverage of Federal workers is presented, without attempting to be comprehensive or detailed. A brief explanation of windfall benefits is followed by a discussion of some proposals to deal with windfall benefits without covering Federal workers by social security. Finally, coverage of social security would affect other Federal programs available to Federal workers. Two of these programs are discussed.

WINDFALL BENEFITS

Employees who retire from noncovered employment and receive a full annuity often are able to enter the private workforce and continue working. If they work long enough to become eligible for social security benefits, issues of equity are raised. This is the problem of windfall benefits. These employees who spend only a portion of their work career in employment covered by social security acquire benefits from the program under especially favorable conditions. These windfall benefits are a product of the methods by which social security benefits are computed under present law.

The social security program, in accordance with social adequacy principles, has a "tilt" in its benefit structure. This tilt provides relatively larger benefits to workers who have low lifetime earnings. These weighted benefits, though low, represent a high return on the worker's contributions.

The windfall benefits problem, it must be emphasized, is not that some workers earn two pensions: social security is supposed to be supplemented. The workers who become eligible for such benefits do so through normal compliance with current laws. Federal workers who also have employment covered by social security find that contributions to CSRS and to social security are mandatory. They have no choice; they cannot refuse to make these contributions; they cannot avoid earning benefits under both systems.

Receipt of windfall benefits is nonetheless unfair for two reasons. First, workers who receive windfall benefits receive a far greater return on their contributions to social security than other workers with similar earnings patterns in covered employment. Noncovered employment is exempt from social security taxes and artificially reduces the lifetime earnings used to determine who qualifies for weighted benefits under social security. Thus, workers with noncovered employment make fewer contributions yet receive relatively more benefits than other workers. Second, the cost of paying these weighted benefits to workers with noncovered employment is borne by the workers (and their employers) who are covered by social security. The cost of these windfall benefits has been estimated to be about $420 million a year and rising.[1]

ALTERNATIVES TO COVERAGE

At this time, there are essentially two alternatives to social security coverage of Federal workers that would address the most pressing problems under present law. First, there are proposals to modify the social security benefit formula in order to offset or eliminate windfall benefits. Second, there have been proposals for transfers of credits between social security and CSRS to eliminate or reduce gaps in insurance coverage. While neither of the alternatives would solve all of the problems that arise when social security coverage is not universal, both alternatives have advocates.

OFFSETS TO ELIMINATE WINDFALL BENEFITS

Both the Administration's social security financing proposals and Represenative J.J. Pickle's Bill (H.R. 3207) contain a provision to eliminate windfall social security benefits for persons with pensions from noncovered employment. The windfall stems from the fact that the social security benefit formula is weighted in favor of low earners so that these workers receive a higher replacement rate than higher earners do. The benefit formula, however, does not differentiate between a worker with a lifetime of low earnings and a worker of the same age with a short period of high earnings, (say, for example, a retired government worker with a postretirement job in covered employment) which total the same amount as the low earner's total from a lifetime of work. Both the Administration and Pickle proposals address this aspect of the benefit formula.

ADMINISTRATION PROPOSAL

All persons with pensions from noncovered employment and simultaneous entitlement to social security benefits would have their social security benefit amount computed by a different formula than that used to compute benefits for other social security beneficiaries. A regular primary insurance amount (PIA) would be computed for the worker as under present law. This PIA would be the basis for all dependents' and survivors' benefits, unaffected by the reduction in the worker's benefit. A second PIA would be computed using only the top two brackets of the benefit formula. Under present law, benefits are computed by giving 90 percent of the first $211 of monthly wages, plus 32 percent of the amount between $211 and $1,274, plus 15 percent of all wages above $1,274 (the dollar amounts are 1981 figures, since they are increased each year by increases in average wages). Under the Administration proposal, the benefit would be 32 percent of the first $1,274 plus 15 percent of wages above that. If the resulting reduction is more than half of the amount of the worker's noncovered pension, the PIA only would be reduced by half of the noncovered pension.

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[1] U.S. Department of Health, Education, and Welfare. Universal Social Security Coverage Study Group. Report of the Universal Social Security Coverage Study Group. March 1980. Washington, 1980. p. 60. Sylvester J. Schieber of Employee Benefit Research Institute has calculated the cost of windfall benefits currently to be about $491 million.

For all workers with average indexed monthly earnings (AIME) of at least $211 this year, the reduction would be a flat $122, or one-half the amount of their noncovered pension, whichever would be lower. For workers with an averaged indexed monthly earnings of less than $211, the reduction would be the difference between 90 percent of the AIME (what they would get under present law) and 32 percent of the AIME (what they would get under this proposal); again, the benefit would be reduced by this amount or by one-half of the worker's noncovered pension, whichever is lower. The proposal would apply to all workers reaching age 62 after 1981.

The formula would be as follows: 32 percent of AIME up to $1,274, plus 15 percent of remaining AIME but, not less than current law PIA minus 50 percent of civil service pension.

The estimated savings in fiscal year 1982 through 1986 is $600 million. In the long run, the proposal would yield savings of 0.09 percent of taxable payroll.

H.R. 3207 (CONGRESSMAN PICKLE)

For persons with pensions from noncovered employment and simultaneous entitlement to social security benefits, H.R. 3207 also would change the social security benefit formula. When computing the primary insurance amount (PIA) of a worker with dual entitlement, earnings from both covered and noncovered employment would be combined, after which average indexed monthly earnings (AIME) would be computed in the same way as under existing law. However, the resulting primary insurance amount would be reduced by the ratio of the individual's total covered indexed earnings to his total covered and noncovered indexed earnings, subject to the earnings limit.

The noncovered indexed earnings used in this formula would be only those earnings in 1982 and thereafter. However, there would also be a "length-of-service reduction" of 1 percent of PIA for each year prior to 1982, in excess of 10, in which the worker had no covered earnings. The reason for not including pre-1982 noncovered earnings in the AIME formula is that identifying such earnings would present administrative diffficulties. This being the case, the "length-of-service reduction" was added to effect an immediate reduction in benefits to persons newly coming on the rolls with dual entitlement.

The provision would be effective for new social security entitlement after August 1981, except that it would not apply to persons who reached age 65 in August 1981 or earlier.

The formula would be as follows: Total covered AIME ÷ total combined AIME × Combined PIA = Reduced PIA (ultimate formula).

Short service reduction: 1 percent PIA reduction for each year of zero earnings prior to 1982 (with 10 zeros dropped).

The estimated savings in fiscal year 1982 through 1986 for the proposal is $200 million. In the long run, the proposal would yield savings of approximately 0.04 percent of taxable payroll.

TRANSFER OF CREDIT PROPOSALS

Over the past 15 years, various groups have recommended the transfer of Federal service credits to social security for employees who die, become disabled, or leave Federal employment before becoming eligible for CSRS benefits. Such transfers of credit would eliminate many of the current gaps in insurance coverage for Federal workers, but these proposals have languished due to their considerable costs and other uncertainties.

Transfer of credit proposals, in simple terms, would provide social security protections to Federal workers who need them. These protections would be offered solely on the basis of adverse selection; that is, the credits would be transferred only if there is a disablement or death that would meet the social security eligibility criteria and only if the worker is not entitled to a CSRS annuity. Each transfer of credits would be accompanied by a transfer of the employee's CSRS contributions.

It is not always clear, however, whether these proposals would require a transfer of the employer's CSRS contributions as well. If the transfers do not include the employer's contributions, then the new benefit liabilities created for social security by these proposals would greatly exceed the new revenues generated. If the transfers do include the employer's contributions, then CSRS costs would increase because, under present law, the employer's contributions are used solely to underwrite the benefits of those Federal workers who do meet the CSRS eligibility standards. Thus, transfer of credit proposals would increase costs for either social security or CSRS.

Other uncertainties about transfers of earnings credits to social security when workers leave Federal service include whether transfers of credit would be mandatory or voluntary. If transfers were mandatory, to illustrate, Federal workers' current right to a refund of their CSRS contributions would have to be substantially altered. How transferred Federal service would be treated by CSRS for workers who subsequently return to Federal employment is not clear and could result in inequities for some workers.

ANCILLARY BENEFITS ISSUES

The options for coordinating CSRS and social security presented in this report focus on retirement benefits. Both CSRS and social security, however, offer other benefits as well. Social security coverage would necessitate modifications in a number of these ancillary benefits. Such modifications would be complex or technical and are not discussed in this report. However, a brief description of the issues involved is provided below for two of the most important benefits: disability and health insurance.

DISABILITY

To be eligible for disability benefits under CSRS, an employee must have completed 5 full years of service and must be unable to perform the duties of his current grade and class of position. Agencies are instructed to restructure jobs wherever possible and to aggressively seek other suitable positions at the same salary and grade. In practice, employees unable to do one essential function of their jobs are considered to be totally disabled; the disability program does not provide for partial disability.

An employee eligible for disability receives either an annuity computed under the standard formula, or, if larger, the lesser of 40 percent of High-3 average salary or the annuity that would have been paid if the employee had continued working until age 60 at the same High-3 pay. Employees with less than 22 years of creditable service generally receive the minimum. The annuity continues until the employee returns to work or is otherwise determined to be medically recovered, or until the disabled employee has found a job that for 2 consecutive years pays at least 80 percent of the current salary for the position held prior to the onset of the disability. After entitlement, disability annuities are fully adjusted for inflation.

Critics of the present sick leave and disability structure usually point to three problems arising from the present arrangement. First, as in any disability program, there are inherent difficulties in accurately and objectively distinguishing legitimate claims of disability from claims that arise because of a loss of motivation.

Recent efforts by Office of Personnel Management (OPM) to tighten the determination process have mitigated this concern somewhat because, according to the General Accounting Office (GAO), the rejection rate for disability applications has climbed from between 8 percent and 12 percent to a high of 47 percent. Whether substantial numbers of these initially rejected claims will be overturned during subsequent appeals is as yet unknown. Testimony offered before the House Post Office and Civil Service Committee asserts as many as half of these rejections may be overturned.

Second, because the program does not provide for temporary disability, some employees may be forced to choose between a period without income or applying for permanent disability retirement. If an employee exhausts accrued and advanced sick leave before completing a necessary period of convalescene, he could be without any income until sufficiently recovered to resume working. On the other hand, if the employee chooses to apply for disability, there is no firm guarantee that once recovered he will be reassigned his previous job. GAO points out that the administrative difficulties of reviewing the required evidence of medical recovery means that a recovered disability annuitant may be continued on disability income for an indefinite period, regardless of the employee's willingness to resume working or any hardships on the employee or family.

Third, the distribution of disability benefits does not consider differences in employee characteristics, but is based upon salary and, to a lesser extent, years of service. There are, for example, no additional benefits for dependents of disabled workers. As discussed above in the analysis of options, a plan has been developed for a disability program for Federal workers to supplement social security coverage (including disability insurance).

HEALTH BENEFITS

Most Federal employees and their dependents are eligible to enroll voluntarily in the Federal Employees Health Benefits

(FEHB) program. The government and the employees share the costs. The government's share of the costs is equal to 60 percent of the average high option premium of six representative health plans, but may not exceed 75 percent of the total premium charged by any one plan.

Enrollment in a health benefits plan may continue after retirement with the same benefits and at the same cost as if the worker were still an employee, if certain conditions are met. If coverage is continued after retirement, the annuitant's share of the premiums is automatically deducted from monthly annuity checks and credited, along with the applicable government contribution, to the FEHB health benefits fund.

Many Federal workers and retirees over age 65 have worked long enough in employment covered by the social security system to also become insured for benefits under the Hospital Insurance (or Part A) portion of the Medicare program. The Supplementary Medical Insurance (or Part B) portion of Medicare is available to virtually everyone over age 65. As a result, there are Federal workers eligible for both Medicare and FEHB benefits.

When Medicare was enacted, it was intended that benefits under that program (with certain minor exceptions) would be paid without regard to any other benefits that might be payable under other health insurance plans. As a result, when health expenses are incurred and covered under both Medicare and a FEBH plan, Medicare pays its benefits first (i.e., Medicare is the "primary" payor). The FEHB plans generally pay benefits for persons also covered under Medicare by paying up to 100 percent of any remaining covered expenses.

On several occasions, Congress has considered changes in coordination arrangements between the FEHB and Medicare programs, including recent proposals that would have made Medicare secondary payor to FEHB plans for persons with dual coverage (the FEHB plans would be "primary"). Such proposals, however, were not adopted.

There have also been suggestions that Federal workers be required to pay the same Hospital Insurance payroll taxes that most other private workers now pay in connection with employment covered by the social security system. This would result in extending Medicare Hospital Insurance coverage to Federal workers without regard to any other employment they also may have had.

Under this approach, older Federal workers, upon reaching 65, would automatically be covered under the Hospital Insurance portion of Medicare (as most other workers now are automatically covered). Most Federal workers would probably also enroll in the Supplementary Medical Insurance plan, and have the monthly premium costs of such coverage deducted from regular pay (in the case of active workers) or their annuities (in the case of retirees). Many Federal employees and annuitants now enrolled in FEHB plans do not find it advantageous to enroll in Medicare Part B because of overlapping coverage. Under this approach, it is assumed that Medicare would continue to be the primary payor of benefits and that the FEHB plans would provide supplementary coverage to Medicare for the worker or annuitant in the same way as many private employer plans now do.

In the event Federal workers were covered by social security, they would also be covered by Medicare. This would require modifications in the current health benefits under CSRS. Analyzing such modifications is beyond the scope of this report.

APPENDIX D: INVESTMENT OF TRUST FUND ASSETS

CURRENT INVESTMENT PRACTICES

Assets of the Civil Service Retirement and Disability Fund are invested in U.S. Government securities by the Secretary of the Treasury. Although the amount of funds to be invested or redeemed on a given day is determined by the Office of Personnel Management (OPM), all other decisions pertaining to trust fund investment are made by the Treasury Department. Under present law, investments are made according to the following statutory rules:

1. Assets are to be invested in interest-bearing obligations guaranteed as to both principal and interest by the U.S. Government. These securities include obligations issued by federally-sponsored enterprises such as the Government National Mortgage Association and the Federal National Mortgage Association.
2. Obligations are to be purchased at issue at the issue price or at the market price for outstanding obligations.
3. The Treasury is to purchase special issues (obligations not available on the open market) except when it determines that the purchase of marketable securities is "in the public interest."
4. Special issues shall have maturities fixed "with due regard for the needs of the fund" and will pay a rate of interest equal to the average market yield on all marketable interest-bearing obligations of the United States which are not due or callable (redeemable) for at leat four years.
5. Marketable securities purchased by the fund may be sold at the market price; special issues may be redeemed at par plus accrued interest (without penalty or gain from redemption before maturity).

Under these guidelines, the Secretary of the Treasury has invested the great bulk of the fund's assets (96 percent of September 1981 assets) in special issues. The remainder of the fund's assets are invested in two types of marketable securities: long-term Treasury bonds (3 percent of September 1981 assets) and securities of the Government National Mortgage Assocition (0.3 percent of September 1981 assets). Treasury has determined the purchase of marketable securities to be in the public interest only when such a purchase might serve to stabilize the market for Treasury issues and when the yields on marketable securities purchased are higher than the interest rate on new special issues. Historically, Treasury has been reluctant to use trust fund investments to stabilize the market.

As income flows into the fund from payroll deductions, agency contributions, and other sources, it is invested daily in very short-term special issues, which are set to mature on the following June 30. Any certificates of indebtedness that have not been cashed in before maturity in order to meet expenses are redeemed on June 30, with the proceeds reinvested (or "rolled over") in longer-term special issues with maturities averaging about 7½ years. Any long-term special issues coming due that June 30 will also be rolled over into new long-term special issues. Treasury sets the maturity dates for these special issues from 1 to 15 years so that about 1/15 of the longer-term securities comes due each year.

Each month when annuity checks go out, Treasury redeems securities approximately equal in value to the amount of benefits owed, first by cashing in any special issues due to mature on the following June 30, lowest interest rates first. If still more funds were needed, then special issues due to mature one year later would be redeemed, lowest interest rates first, then special issues maturing two years later, three years later, etc. Marketable securities would never be redeemed before maturity until all special issues had been redeemed. As marketable securities reach their maturity dates, the proceeds are rolled over into new marketable bonds or into new special issues.

At the end of fiscal year 1981, Civil Service Retirement and Disability Fund assets totaled about $84 billion. In fiscal year 1980, interest income to the fund was about $5 billion—or about 21 percent of total receipts ($24 billion). The average yield on fund investments during fiscal year 1981 was about 8.8 percent, according to a recent estimate by OPM. Interest rates on recently purchased special issues are considerably higher—14¼ percent in November 1981.

POSSIBLE CHANGES IN INVESTMENT POLICY

From time to time, suggestions are made for altering the way in which fund assets are invested in order to increase interest income to the fund. Most of these suggested changes can be grouped into three broad categories: (1) investing some assets in securities issued by private corporations or State and local governments; (2) increasing participation in the open market for Federal Government securities; and (3) setting maturities on securities with reference to expected changes in interest rates. All three possibilities can be viewed as ways of making CSRS fund investments more like those of private pension funds and less like those of a Federal trust fund. All three changes would increase the amount of risk associated with investments and would require expert advice from skilled portfolio managers.

These changes probably make more or less sense depending on the Civil Service Retirement System (CSRS) restructuring option under consideration; their appeal is greater in the context of plans to cover Federal workers under social security and restructure CSRS into an integrated, supplementary staff pension plan analogous to a private pension. Pressures for these kinds of changes in investment practices would be particularly great if that restructured CSRS were a defined contribution plan under which the amount of the annuity payable upon retirement would not be fixed in the program rules but would depend directly on the rate of return on assets accumulating in the employee's account. Investment practices more like those of private funds might also make sense for the assets accumulated in employee thrift plans or government-sponsored Individual Retirement Accounts (IRAs).

Conversely, the appeal of changes in investment policy is probably least in the context of CSRS restructuring options which would leave Federal employees out of social security as under present law. If CSRS continues to serve as both surrogate social security and corporate pension for Federal workers, some will argue that CSRS assets should continue to be invested as conservatively as the assets of the social security system. Current CSRS fund investment rules are identical to those of the social security trust funds. However, the gap between the rate of return on assets in the social security trust fund portfolio and recent yields on assets of money market funds and certain other private investment funds has prompted some observers to reexamine the rules governing social security trust fund investments. Any changes made in the way social security assets are invested which result in increased returns would yield even greater benefits if applied to the investments of the Civil Service Retirement and Disability Fund. CSRS assets are greater both in absolute terms ($84 billion vs. $49 billion at the end of fiscal year 1981) and in relation to the overall size of the retirement system. In fiscal year 1980, interest income was only 2 percent of total income to the OASDHI system while it was 21 percent of total income to CSRS.

PRIVATE SECTOR INVESTMENT

Some believe that diversification of the CSRS fund's investments to include securities issued by private corporations or by State and local governments would result in a higher rate of return than is presently available with investments restricted to the Federal credit market. There appears to be widespread agreement, however, that there are some serious problems associated with such an investment strategy. Probably the primary objection to such a strategy is the degree of control the Federal Government could exercise over the private market. Different administrations could choose to use trust fund investments to shore up ailing industries, support worthy social causes, or even reward political allies. Another important objection to private sector or State/local government investment is the concern that such investments entail higher risks and could result in loss of principal. In addition, securities of State and local governments offer lower rates of return than they otherwise would because of the Federal tax-free status of interest paid to investors. This tax exemption is meaningless to the CSRS fund, but the fund would be forced to take the low rate of return if it purchased these securities.

Also, it is not clear that private sector investments would prove more profitable than investments in U.S. Treasury special issues. According to the testimony presented by Social Security Administration witness Robert J. Myers to the Subcommittee on Social Security of the House Ways and Means Committee on October 16, 1981, the net rate of investment income (before Federal income taxes) of all U.S. life insurance companies in calendar year 1980 was 8.0 percent. This rate of return is lower than the 8.8 percent yield of CSRS fund investments during fiscal year 1980. Also, a 1979 General Accounting Office (GAO) study of the investment practices of 6 Federal employee retirement systems showed that the average rate of return for the five year period 1973 through 1977 was considerably higher for the four retirement systems that invested solely in Federal securities than for the two systems with diversified investments resembling those of private pension funds.

OPEN MARKET PARTICIPATION

If the decision is made to restrict CSRS trust fund investments to securities issued by the U.S. Government, the major question remaining is: under what circumstances should the trust funds purchase securities on the open market and under what circumstances should special issues be purchased? Those who support increased participation in the open market do so because they believe it would result in higher yields on trust fund investments. This belief seems to be based on the very high rates of return achieved by certain private financial institutions (e.g., money market mutual funds) during recent years, even though they invested primarily or even exclusively in U.S. Government securities.

Since the interest rate on new special issues is a long-term rate (average market yield on all marketable Treasury securities not due or callable for four years or longer), it makes sense that the rate on new special issues has fallen below the rate on short-term Treasury securities in the past year or two. Recently, short-term rates generally have been somewhat higher than long-term rates, although this is not the normal pattern. By purchasing short-term Treasury securities on the open market, the Secretary of the Treasury could have obtained higher-yielding securities than the special he bought instead. However, the difference in interest rates would have been relatively small, while the special issues carry the important but difficult to quantify advantage of redemption at par at any time without penalty.

The striking difference between the yields obtained recently by money market funds investing in government securities and the yields obtained recently by the CSRS fund is primarily a reflection of the fact that the fund portfolio contains many securities purchased some time ago, while the money market fund portfolios reflect very recent interest rates. If the goal is to bring trust fund earnings more in line with current market interest rates, changing the way maturities are chosen for securities purchased by the funds would be a more direct way to move in that direction than abandoning special issues in favor of open market issues. Securities with short terms would accomplish this result—whether they were purchased on the open market or were special issues to the trust funds. And if the special issue interest rate formula were modified so that different rates could be assigned to short- and long-term special issues, based on current market rates for securities of similar maturity, the trust funds could achieve the same overall rate of return on investments that money market funds obtain in the open market. Whether heavy reliance on short-term securities represents a prudent investment strategy is another issue. The point here is that the same high rates of return recently obtained in the open market could be closely approximated by the CSRS fund within the framework of special issues.

Why might it be desirable to avoid increased open market participation if the same purposes can be accomplished without doing so? Treasury traditionally has emphasized two reasons for keeping Federal trust fund monies out of the open market. First, this practice protects the Federal credit market from sudden distortions in prices and other unpredictable outcomes which could result from the purchase and sale of securities worth many billions of dollars each month as receipts are invested and as securities are redeemed in order to pay benefits under the various Federal trust fund programs. CSRS alone redeems over $1 billion in securities each month. Second, investing almost exclusively in special issues allows the trust fund to cash in obligations at par value at any time funds are needed, whereas marketable obligations would have to be sold on the open market if not held to maturity. In recent times of rising interest rates, most government securities have been selling at prices considerably below par value. If the Treasury were forced to redeem marketable securities in order to meet benefit payments, in times of rising interest rates they would have to sell those securities for considerably less than face value and the trust funds would suffer a capital loss. When the potential for such capital losses is weighed against the potential for higher yields and possible capital gains in the open market, many observers express concern about the risk that over time the losses could outstrip the gains. And if the same higher yields could be obtained on special issues without exposing the trust funds to the possibility of capital losses in the open market, expanded open market participation seems particularly difficult to justify.

MATURITIES OF SECURITIES PURCHASED BY THE FUND

Some critics of Treasury's performance as the manager of trust fund investments emphasize what they perceive to be Treasury's overreliance on long-term securities. They are particularly critical of this practice at present when short-term interest rates are generally higher than long-term rates. Treasury readily concedes that its investment decisions both in the past and at present reflect a clear preference for long-term over short-term securities. The Department contends that this practice helps insulate the trust fund portfolios against sudden changes in market interest rates, preventing sudden losses when interest rates drop and rendering the stream of interest income to the fund more predictable. It has defended the emphasis on long-term securities on the grounds that this policy helps protect the trust funds from precipitous changes in investment yields—particularly during economic downturns.

Treasury spokesmen argue that the pursuit of a short-term investment strategy could produce a short-run gain during a period of rising interest rates, but that gain would be counterbalanced by corresponding large losses when interest rates fell. Under the long-term strategy favored by the Treasury, the funds also experience gains and losses as market interest rates change, but they take place much more gradually and, it is argued, are probably smaller. Since changes in fund investment yields take place gradually, there is a lag between the time market interest rates change and the time these changes are reflected in fund investment yields. At present, this lag seems to operate to the fund's disadvantage, but as interest rates fall, the fund will continue to have high yields while money market funds heavily invested in short-term securities will see their yields fall with the interest rates.

Treasury also has been criticized for its unwillingness to set maturities on securities purchased by the fund based on expected changes in market interest rates. These critics argue that a "prudent investor" in the private sector might stick with short-term securities while interest rates continue to rise, but move to long-term issues when he felt that interest rates had peaked, in order to "lock in" the high yields for as long as possible. Several reasons have been offered for rejecting this approach for Federal trust fund investments. First, Treasury maintains that predictions of future interest rate trends are chancy at best. If the predictions proved wrong, the fund could lose money. However, Treasury's critics believe that the funds are losing money now as a result of maturity-setting practices that ignore market interest rate trends. Second, Treasury would be placed in an awkard position in that as manager of a trust fund portfolio, it would be "betting" on a certain pattern of future interest rates that might differ from the official predictions of the Administration or the pattern the Administration was trying to bring about. For example, in a situation of rising interest rates, a prudent investment manager would want to keep his assets in short-term securities so that funds would be available for reinvestment when interest rates were even higher. However, the Administration would be engaged in an effort to bring interest rates down. If the Secretary of the Treasury really believed that his own Administration's efforts to lower interest rates would succeed, then he would move toward long-term securities, in order to lock in today's high rates. If the Secretary of Treasury based his trust fund investment decisions on the official Administration interest rate forecast, the trust fund could suffer as a result.

EFFECT OF CHANGES IN CSRS INVESTMENT POLICY ON THE FEDERAL BUDGET

There are two major points to make with respect to the possible effect on the overall Federal budget of changes in the way CSRS trust fund assets are invested. First, any investment of assets in the private sector would reduce the amount available for borrowing by the general fund of the Treasury. If the general fund were in deficit as it is today, then the Treasury would be forced to borrow more from the public or raise additional revenues from other sources in order to meet its obligations. Second, any changes in investment policy that increased the yield on CSRS assets without moving to private sector investments would produce new income for the CSRS fund, but would decrease the general fund by an exactly offsetting amount. Therefore, as long as the CSRS fund is wholly invested in U.S. Government securities, increasing the amount of interest income on investments has no significant effect on the overall Federal budget.

APPENDIX E: LEGAL ISSUES RELATING TO LEGISLATIVE MODIFICATIONS OF THE FEDERAL CIVIL SERVICE RETIREMENT ACT

The U.S. Supreme Court and lower Federal courts have addressed a number of issues relating to congressional modification of the Federal Civil Service Retirement Act, 5 U.S.C. §8331 et seq. The issue which has arisen most frequently is if, and to what extent, public employees who have participated in a contributory government retirement system have vested property rights in their retirement benefits which are protected by the Due Process Clause of the Fifth Amendment.

The U.S. Supreme Court, in very early decisions, has held that a pension granted by the Federal Government confers no rights which cannot be revised, modified, or recalled by subsequent legislation. The High Court has described a pension as "a bounty of the government." *Walton* v. *Cotton,* 19 How. (60 U.S.) 355, 358 (1857) (Revolutionary War pension). The Court has also held that no pensioner has a vested legal right to his pension, and that Congress has the right to give, withhold, distribute, or recall the pension at its discretion. *United States ex rel. Burnett* v. *Teller,* 107 U.S. 64, 68 (1883) (Mexican War pension). And in *Pennie* v. *Reis,* 132 U.S. 464 (1889) the High Court held that until the pension or retirement pay (in this case a city police pension) is due, the employee's right thereto is not contractual but ". . . a mere expectancy, created by the law, and liable to be revoked or destroyed by the same authority." *Id.* at 471. See also *United States* v. *Fisher,* 109 U.S. 143 (1883), *Butler* v. *Pennsylvania,* 10 How. (51 U.S.) 402 (1850) and *McFarland* v. *Bieber,* 32 App. D.C. 513 (D.C. Cir. 1909).

The noncontractual nature of a public pension was emphasized in *MacLeod* v. *Fernandez,* 101 F. 2d 20 (1st Cir. 1938), *cert. denied, Toste* v. *MacLeod,* 308 U.S. 561 (1939). In that decision a Puerto Rican government employee had retired and was receiving a monthly pension for life. However, subsequent to the employee's retirement, a statute was passed which caused his monthly pension payments to be reduced. The employee brought suit, alleging that he had been deprived of a vested property right acquired by him under the statute in force when he retired. However, the court stated at 23, quoting from *City of Dallas* v. *Trammell,* 129 Tex. 150, 153, 101, S.W. 2d 1009, 1012:

> * * * (A)s pensions granted to employees of the state or its municipalities are purely of statutory origin, *the employees, in making contracts of employment under which the right to participate in the pension fund accrues, do so in contemplation of the reserved right of the Legislature to amend or repeal the law on which the pension systems are founded; and therefore the right to participate in the fund, even though arising from the contract, is based upon the anticipated continuance of existing laws.* Under this theory, there can be no vested interest in the future installments of pensions which will prevent the Legislature from repealing the law upon which the system is founded, or modifying the law in such a way as to diminish the amount of future payments. (emphasis in opinion)

The general rule that a public employee who has contributed to a compulsory statutory retirement or pension fund has no vested right in it until the particular event happens upon which the money or part of it will be paid has been reaffirmed by recent court cases dealing with the Federal Civil Service Retirement Act and other Federal pension programs. In *Stouper* v. *Jones,* 284 F. 2d 240 (D.C. Cir. 1960) a civil service employee had retired and was receiving disability annuity payments. While the retired employee was receiving such payments, Congress amended the Civil Service Retirement Act by adding a new provision to the effect that if the earning capacity of an annuitant were restored to a level fairly comparable to the current rate of pay for the position held immediately prior to retirement, the annuity would be discountinued. The Retirement Division of the Civil Service Commission determined that the employee had been restored to such an earning capacity and accordingly the disability annuity was discontinued. In upholding the Civil Service Commission's determination, the Court of Appeals cited the established rule that "a pension granted by the Government confers no right which cannot be revised, modified or recalled by subsequent legislation." Id. at 242. In addition, the Court noted that benefits under the Civil Service Retirement Act, like those under the Social Security Act, are not based on the employee's contributions to the retirement fund, but instead on the employee's earnings record and years of service. The Court thus concluded that "an employee has no right under the Retirement Act based on contractural annuity principles." Id. at 243.

Other Federal Court decisions have reached similar conclusions: *Raffery* v. *United States,* 210 F. 2d 934 (3rd Cir. 1954), *Steinberg* v. *United States,* 163 F. Supp. 590 (Ct. of Claims 1958), and *Prentiss* v. *United States,* 117 F. Supp. 200 (Ct. of Claims 1953). Federal Courts have recognized, as an exception to the rule that a pensioner has no vested right in a pension, the proposition that vested rights do accrue where a particular pension payment has become due. Thus, when the particular event happens upon which a payment or a part of a payment is to be paid occurs, then there exists a vested right in the person to such payment, his interest in the pension funds being, until then, a mere expectancy created by law.[1] *MacLeod* v. *Fernandez,* supra, *Pennie* v. *Reis,* supra.

Recently, in *U.S. Railroad Retirement Board* v. *Fritz,* 449, U.S. 166 (1980), the U.S. Supreme Court reaffirmed that Congress has broad power to modify the provisions of Federal retirement programs. At issue in that case were the 1974 Amendments to the Railroad Retirement Act. While the Amendments were designed to place the railroad retirement system on a sound financial basis, they also had the effect of reducing the benefits paid to many retirees who had left the railroad industry prior to 1974. The High

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[1] It is noted that with respect to State pension statutes, that State courts have treated the rights of employees under such statutes somewhat differently. In some jurisdictions State courts have viewed rights in compulsory contribution pension systems as being nonvested only during the period prior to an employee's fulfillment of the requirements for grant of the pension. Thereafter, the pension rights are deemed to vest and are immune from abolition. In addition, in some jurisdictions the question whether public employees' statutory pension rights are vested has been handled legislatively. Thus, the New York State Constitution was specifically amended to provide that such pension rights are vested. And an Ohio statute relating to firemen's and policemen's pensions contains a similar provision. See the annotation at 52 A.L.R. 2d 437, "Vested Right of Pensioner to a Pension," for a general discussion and listing of State cases and statutes on this subject.

Court upheld the validity of the 1974 Amendments, stating that the provisions were rationally related to the congressional purpose of insuring the solvency of the retirement system and protecting vested benefits. Thus, Congress clearly has the power to make adjustments in the eligibility of retirees for benefits under Federal retirement programs. Such adjustments will be sustained by the courts if reasonably related to the purposes of the Federal program, even where there may be some disparity of impact on individual retirees.

A further analysis of the particular rights which a civil service employee may have in his personal contributions to the Federal Civil Service Retirement Fund is required in order to fully assess Congress' power to modify statutory provisions of the Civil Service Retirement Act. By statute, an employee's contributions, together with the equal or greater sums provided by the Federal Government, provide the basis for receiving specified retirement benefits and disability benefits. 5. U.S.C. §§8336-8338 (1976). The employee's contributions are returnable in the event of his leaving Federal service before eligibility for retirement. 5. U.S.C. §§8331(8) and 8342 (1976). They are also payable, usually with interest, to his heirs if at death the lump sum credit had not previously been paid to him in benefits. 5 U.S.C. §8342(d-f) (1976).

There is scant case law on the subject of the property rights which a civil service employee is deemed to have in his contributions to the Retirement Fund. One judicial decision wherein a court discusses the nature of these rights is *Hogan* v. *United States,* 513 F. 2d 170 (6th Cir. 1975), cert. denied, 423 U.S. 836 (1975). The Court of Appeals in that decision held that the portion of a Federal civil service employee's compensation which is automatically deducted from his pay check and paid into the Civil Service Retirement Fund is gross income for Federal income tax purposes for the year deducted. The fact that employee participation in the Civil Service Retirement System is a mandatory condition of employment does not deprive government employees of any constitutional right. In its analysis, the court stated that an employee's contributions "represent valuable rights which were vested in him at the time. . . . Present vesting of a right, even if its enjoyment is postponed to the happening of a future event, is an important aspect of gross income for income tax purposes." Id. at 174. Thus, civil service employees may be deemed to have specific, vested rights in their contributions to the Civil Service Retirement Fund greater than the "mere expectancy" of an annuity when the retirement conditions are met. U.S. Tax Court decisions since Hogan implicitly affirmed this proposition. "It is well established that compulsory contributions from an employee's salary into a government retirement fund in which the employee has a nonforfeitable right must be reported as gross income." *Boyer* v. *Commissioner of Internal Revenue,* 69 T. Ct. 521, 535 (1977), *Sibla* v. *Commissioner of Internal Revenue,* 68 T. Ct. 422 (1977).

The vested interest of a civil service employee in his contributions to the Retirement Fund is perhaps illustrated by the action of the Civil Service Commission as set forth in the case of *Hiss* v. *Hampton,* 338 F. Supp. 1141 (D. D.C. 1972). While the Commission denied annuity payments to Alger Hiss under Public Law 87-299, which cut off all annuity benefits to persons convicted of certain crimes, it nevertheless informed Hiss that he was entitled to a refund of his retirement contributions. That action appears to lend support to the proposition that civil service employees may have a vested property interest in their contributions to the Civil Service Retirement Fund, which interest is able to be protected by the courts.

Since, as a general proposition, Congress has the authority to legislatively alter provisions of the Social Security Act[2] and the Federal Civil Service Retirement Act, Congress would not be precluded from integrating both systems in some fashion. However, Congress is subject to constitutional restraints against enacting legislation which impinges upon fundamental rights as guaranteed by the U.S. Constitution. See *Jimenez* v. *Weinberger*, 417 U.S. 628 (1974); *Califano* v. *Goldfarb*, 430 U.S. 199 (1977). The Due Process and Equal Protection Clauses of the Fifth Amendment pose particular limits upon modifying legislation which is arbitrary or lacking in rational justification. *U.S. Railroad Retirement Board* v. *Fritz*, supra. Within such constitutional limitations Congress may "revise, modify or recall" civil service or social security benefits. With respect to employee contributions to the Civil Service Retirement Fund, however, it appears that a civil service employee may have a presently vested right in such contributions, and that Congress may be restricted from adversely affecting such property rights. This is not to say that Congress may not prospectively alter provisions relating to employee contributions. It is only with regard to legislation affecting presently-accrued property rights that Congress may be so restricted.

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[2] With respect to legislative modifications of provisions of the Social Security Act, see *Flemming* v. *Nestor*, 363 U.S. 603 (1960) and *Richardson* v. *Belcher*, 404 U.S. 78 (1971).

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